TAX AND EXPENDITURE LIMITATIONS AND ECONOMIC GROWTH

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I. INTRODUCTION

The United States was built on a tax revolt, the Boston Tea Party,[1] and the early Republic was framed around such tax revolts as Shays' Rebellion of 1786, the Whisky Rebellion of 1791, and Fries Rebellion of 1798–1799.[2] Indeed, the beginning of the Civil War was triggered by agricultural tariffs.[3] Tax limitations on local governments have a long history, the oldest being an 1875 limit on the growth in property tax rates in Missouri.[4] Today tax revolts take the form of tax and expenditure limitations ("TEL").[5] The beginning of the recent tax limitation movement is attributed to Howard Jarvis and the "People's Initiative to Limit Property Taxation," or Proposition 13 in California.[6] This initiative was closely followed by Massachusetts' Proposition 2½, Michigan's Headlee Amendment, and others.[7] Today, forty-six states

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1. Daniel R. Mullins & Bruce A. Wallin, *Tax and Expenditure Limitations: Introduction and Overview*, PUB. BUDGETING & FIN., Winter 2004, at 2.

2. Marjorie E. Kornhauser, *Legitimacy and the Right of Revolution: The Role of Tax Protests and Anti-Tax Rhetoric in America*, 50 BUFF. L. REV. 819, 842–51 (2002).

3. *Id.* at 852–55.

4. Mullins & Wallin, *supra* note 1, at 4.

5. *Id.* at 2–3.

6. *Id.* at 2.

7. *See* Bruce A. Wallin, *The Tax Revolt in Massachusetts: Revolution and Reason*, PUB. BUDGETING & FIN., Winter 2004, at 34–50; Susan P. Fino, *Tax Limitation in the Michigan Constitution: The "Headlee Amendment," in* MICHIGAN AT THE MILLENNIUM 681 (Charles L. Ballard et al. eds., 2003); Therese J. McGuire & Kim S. Rueben, *The Colorado Revenue Limit: The Economic Effects of TABOR*, ST. TAX NOTES, May 8, 2006, at 459.

have some form of constitutional or statutory state limitations on local or state governments.[8] The most restrictive TEL in the United States is Colorado's Taxpayer's Bill of Rights ("TABOR"), which places severe restrictions on how much state and local government spending can increase.[9]

For the past few years, Wisconsin has seriously considered amending the state's constitution along the lines of Colorado's TABOR.[10] Originally introduced in the spring of 2004 by Representative Frank Lasee, Wisconsin's TABOR, or the Lasee-Wood Amendment, has spurred significant debate throughout Wisconsin about the role of government in general and the impact of taxing and spending on the well-being of residents.[11] What has motivated much of this discussion in Wisconsin is the perception that Wisconsin is a "high" tax state.[12] Such conclusions are typically derived by comparing Wisconsin state and local taxes to the other forty-nine states. Wisconsin's state and local taxes per $1000 of personal income ranked as high as third in 1970 and as low as thirteenth in 2000.[13] The case is not so clear when the analysis is broadened to include fees and to examine expenditure levels.[14] Such comparisons do not include the quality of public services nor do they address the varying costs of providing services as affected by outside forces, such as climate, geographic distance, and population density.

It should be pointed out that there have been TELs at the local government level in Wisconsin for about ten years. The local TELs have recently been tightened with a focus on property tax, the dominant source of revenues for Wisconsin local government.[15] These are statutory limitations, and since they focus primarily on the property tax, state government has not been affected. The current constitutional amendment proposals would "lock-in" even tighter controls on local

8. Mullins & Wallin, *supra* note 1, at 3.

9. Bell Policy Center, *Ten Years of TABOR: A Study of Colorado's Tax and Spending Limit*, ST. TAX NOTES, June 30, 2003, at 1119.

10. Andrew Reschovsky, *The Taxpayer Bill of Rights: A Solution to Wisconsin's Fiscal Problems or a Prescription for Future Fiscal Crises?* 88 MARQ. L. REV. 135, 135 (2004).

11. *Id.* at 135 n.1.

12. *Id.* at 137–38.

13. *See id.* at 141. Authors' calculations based on data from U.S. Census Bureau, State and Local Government Finances, http://www.census.gov/govs/ www/estimate.html (last visited Mar. 30, 2007).

14. Reschovsky, *supra* note 10, at 139.

15. *Id.* at 138.

government revenues or expenditures, but more importantly, they would impose the same limits on state government.[16]

The political and public debates that have swirled around the TABOR and Wisconsin Taxpayer Protection Amendment ("WTPA") proposals have two central tenets: (1) tax burdens are beyond the ability to pay for the majority of Wisconsin residents, and (2) the burden has hindered the ability of the state to grow and prosper economically.[17] Information concerning the question of tax burdens can show how Wisconsin compares with other states.[18] But whether tax burdens are excessive depends on the political preferences of citizens: are they willing to pay for the public services they receive? The link between taxes, spending and economic growth, and development is an argument that can be quantifiable. As we discuss below, the academic literature examining this link is well established.[19] While business surveys consistently rank taxes as important, in practice taxes are secondary to the larger costs of labor, land, and capital.[20] In addition, these same business surveys point out that quality schools, access to quality public infrastructure, and protective services such as police and fire protection are equally important.[21] TEL proposals, such as a freeze on property taxes, could restrict our ability to invest in the physical and human infrastructure that is a fundamental underpinning of our economy. Current research suggests that only when businesses and residents are not receiving the quantity and quality services for which they are paying is something "broken" with the public sector. The research also shows

16. *Id.*

17. *See id.* at 138–44.

18. *Id.* at 139.

19. *See* TIMOTHY J. BARTIK, WHO BENEFITS FROM STATE AND LOCAL ECONOMIC DEVELOPMENT POLICIES? (1991); BETH WALTER HONADLE, JAMES M. COSTA & BEVERLY A. CIGLER, FISCAL HEALTH FOR LOCAL GOVERNMENTS: AN INTRODUCTION TO CONCEPTS, PRACTICAL ANALYSIS AND STRATEGIES (2004); HELEN F. LADD, LOCAL GOVERNMENT TAX AND LAND USE POLICIES IN THE UNITED STATES (1998); ROBERT G. LYNCH, RETHINKING GROWTH STRATEGIES: HOW STATE AND LOCAL TAXES AND SERVICES AFFECT ECONOMIC DEVELOPMENT (2004); John M. Halstead & Steven C. Deller, *Public Infrastructure in Economic Development and Growth: Evidence from Rural Manufacturers*, 28 J. CMTY. DEV. SOC'Y 149 (1997); Michael Wasylenko, *Taxation and Economic Development: The State of the Economic Literature*, NEW ENG. ECON. REV., Mar./Apr., 1997, at 37; Steven C. Deller & Victor Lledo, *Local Public Sector Performance: Are Wisconsin City and Village Taxes Too High?* (Univ. Wis. – Madison, Staff Paper No. 440, 2001), *available at* http://www.aae.wisc.edu/pubs/sps/pdf/stpap.440.pdf.

20. Reschovsky, *supra* note 10, at 143.

21. *Id.*

that it is often difficult for citizens and businesses to accurately evaluate the services they receive.

If the public sector is indeed "broken," TELs have been advanced as a solution.[22] As described in more detail below, TELs take several forms from targeted legislation to strict constitutional amendments.[23] The argument advanced in Wisconsin for a constitutional approach is that public officials lack the fiscal discipline to adhere to statutory limitations, particularly at the state level.[24] Statutory limits can be more easily modified than constitutional limits.[25]

The question is whether or not TELs, in whatever format, achieve the goals advanced by their advocates. While there is a vast and well-developed amount of academic literature examining the impact of TELs on the structure of governments and spending levels,[26] we are aware of only two studies that examine the impact of TELs on economic growth and development.[27] Our intent with this study is to focus attention on the impact TELs have on economic growth and development. We use annual state level data for the fifty states from 1987 to 2003.

Beyond these brief introductory comments, the paper is composed of six additional Parts. In Part II, we outline the range of TELs that are in place across the United States and review in more detail the TELs enacted in a handful of specific states. We then provide an overview of the literature on the impacts of TELs on state and local government in Part III. In Part IV of the paper we provide a descriptive analysis of Wisconsin's fiscal rankings along with a simple analysis of public sector employment. A simple analysis relating a set of fiscal measures on overall level of economic well-being is then reported. Our analytical growth model and results are then outlined and discussed in Part V, and the paper closes with a summary of our findings and a broad discussion of TELs, with a focus on Wisconsin.

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22. *See generally* BARRY POULSON, AMERICANS FOR PROSPERITY FOUND., A FISCAL DISCIPLINE REPORT CARD: GRADING THE STATES' TAX AND EXPENDITURE LIMITS (2005), *available at* http://www.americansforprosperity.org/includes/filemanager/files/pdf/afp_telrank_0705.pdf.

23. *Id.* at 2.

24. Reschovsky, *supra* note 10, at 137.

25. POULSON, *supra* note 22, at 2.

26. *See, e.g.*, Mullins & Wallin, *supra* note 1, at 2–15.

27. James M. Poterba & Kim S. Rueben, *The Effect of Property-Tax Limits on Wages and Employment in the Local Public Sector*, 85 AM. ECON. REV. 384 (1995); McGuire & Rueben, *supra* note 7, at 459.

II. OVERVIEW OF CURRENT TELS

As noted in the introductory comments above, forty-six of the fifty states have some form of TEL in place on state or local governments, with the oldest being an 1875 limit on the growth in property tax rates in Missouri.[28] But as noted by Poterba and Rueben, no two states are completely alike. TELs range from limits on how fast specific taxes can increase for specific units of government to strict limits on how much government spending can increase from one year to the next.[29] Joyce and Mullins provide a general classification scheme for TELs that is provided in Table 1.[30] Summaries of TELs aimed at local governments are outlined in Table 2,[31] while TELs targeting state government are provided in Table 3.[32]

One important element of individual TELs that is not addressed in Joyce and Mullins' classifications is whether the limits are statutory or constitutional in nature. As discussed in detail by Fino,[33] the distinction between statutory and constitutional limits is significant. Statutory limits can be more easily modified or rescinded than constitutional limits in times of fiscal or economic emergencies.[34] Fino does note, however, that unlike the U.S. Constitution, which is seldom modified, state constitutions are more readily modified, often to reflect the short-term political winds.[35] As of the fall of 2006, there were five proposed changes to the Wisconsin Constitution ranging from limiting the terms of certain county officers to four-year terms, to requiring photo identification to register to vote and to vote, to defining the definition of marriage to be limited to one man and one woman (the gay marriage

28. Mullins & Wallin, *supra* note 1, at 3.

29. *See* James M. Poterba & Kim S. Rueben, Pub. Pol. Inst. of Cal., Fiscal Rules and State Borrowing Costs: Evidence from California and Other States 5, 9 (1999), *available at* http://www.ppic.org/content/pubs/report/R_1299JPR.pdf.

30. The information in Table 1 *infra* is taken from Philip G. Joyce & Daniel R. Mullins, *The Changing Fiscal Structure of the State and Local Public Sector: The Impact of Tax and Expenditure Limitations*, 51 PUB. ADMIN. REV. 240, 241 (1991).

31. The information in Table 2 *infra* is taken from Mullins & Wallin, *supra* note 1, at 6–7.

32. The information in Table 3 *infra* is taken from National Conference of State Legislatures, http://www.ncsl.org/programs/fiscal/telsabout.htm (last visited Mar. 30, 2007).

33. Susan P. Fino, *A Cure Worse than the Disease? Taxation and Finance Provisions in State Constitutions*, 34 RUTGERS L. J. 959, 959–60 (2003).

34. *See id.* at 959.

35. *Id.* at 960–61.

ban amendment), to redefining the governor's line-item veto authority.[36] Even though state constitutions are often modified, constitutional provisions tend to be difficult to remove no matter how dated the amendment or how forgotten the predicament that initiated the provision's original adoption.[37]

Because of the unpopularity of the property tax, most local TELs focus on the property tax.[38] Typical local TELs limit the rate of growth in the property tax rate (mill rate), growth in property assessments, or some combination of the two. The combination is often called a property tax levy limit where the rate of growth in total property tax revenues is limited. Generally, increases are tied to the inflation rate or a set annual rate (e.g., 2%). When the TEL applies just to property tax, local governments can often sidestep the limits by diversifying revenue streams through imposing user fees or charges or expanding the sales tax if one is in place.[39] The rapid acceleration in the use of these alternative sources of revenue in many states can be explained in part by the limitations imposed on property taxes.[40] As other states move away from the property tax to these alternatives and Wisconsin retains its reliance on the property tax, Wisconsin's property tax burden appears relatively high. Because the property tax is predominately used by local governments and in particular public school districts, these types of TELs tend to disproportionately impact local governments. School districts in particular tend to have only property taxes and state revenues for funding.

To gain a better insight into the nature of TELs, we provide an overview of several TELs enacted in the last thirty years to highlight their similarities and differences. They are Michigan's Headlee Amendment, California's Proposition 13, Massachusetts' Proposition

36. For the Wisconsin Constitution to be amended, the proposal must pass both the state assembly and senate in two back-to-back legislative sessions and then is passed to the voters for approval. Simple majority voting rules apply. The governor's office plays no formal role other than a bully pulpit to lobby for or against the provision. The Wisconsin TABOR and WPTA provisions have passed the assembly but have not been approved by the senate. *See* Revisor of Statutes Bureau, Wis. State Legislature, http://www.legis.state.wi.us/rsb/2wiscon.html.

37. Fino, *supra* note 33, at 959 (quoting Stewart E. Sterk & Elizabeth S. Goldman, *Controlling Legislative Shortsightedness: The Effect of Constitutional Debt Limitations*, 1991 WIS. L. REV. 1301, 1304).

38. Daniel R. Mullins, *Tax and Expenditure Limitations and the Fiscal Response of Local Government: Asymmetric Intra-Local Fiscal Effects*, PUB. BUDGETING & FIN., Winter 2004, at 111, 112.

39. *Id.* at 113.

40. *Id.* at 112–13.

2½, and Colorado's TABOR. While each of these has a popular name, in general, the TELs in each state are a series of laws and amendments, often related and sometimes complicating each other.

A. Michigan

Michigan's Headlee amendment was passed in 1978.[41] The amendment is actually a package of changes to article IX of the state constitution.[42] The major provisions include: (1) an overall limit on state revenue collections (a function of state revenues in 1978–1979 and total personal income in 1977); (2) a similar limit on spending; (3) a fixed share of the state budget for local governments; (4) a property tax rate rollback if growth in revenues on a community-wide basis exceeds the rate of inflation; and (5) state funding of new local government mandates.[43] This later provision has resulted in continuing litigation over funding of special education programs.[44]

Proposal A, passed in 1994, further limits property taxes by capping the increase in assessments on each individual parcel to the rate of inflation.[45] This is similar to Proposition 13 in California. Proposal A also requires a three-fourths vote of the legislature to increase the property tax levies used by local school districts.[46] This provision moves control from the local to the state level. While local taxes decreased, state taxes increased as a result of Proposal A.[47]

At the state level in Michigan, there are continuing accounting questions on how revenues are classified and which are subject to the state revenue limit.[48] The supreme court has had to define almost every aspect of the amendment. Revenues that are less than 1% over the limit may be transferred to the rainy day fund.[49] If excess revenues are more than one percentage point over the limit, they must be returned to payers of the state income tax or the single business tax.[50]

41. Fino, *supra* note 33, at 987.
42. Fino, *supra* note 7, at 681.
43. *See id.* at 681, 685, 690.
44. *Id.* at 691–93.
45. *See generally id.*
46. *See generally id.*
47. *Id.* at 688.
48. Fino, *supra* note 33, at 988–90.
49. *Id.* at 992.
50. *Id.*

B. California

Proposition 13 was passed by California voters in 1978.[51] Proposition 13 was preceded by several property tax limitations, and school tax revenues had already been capped in 1972.[52] The Proposition limits the property tax rate to 1% and limits increases in assessments to 2% or the rate of inflation, whichever is less, unless the property has been improved.[53] When property changes hands, the assessment may be brought up to market value.[54] At the time of implementation, assessed values were rolled back two years.[55] Voter override is not allowed for operating purposes.[56] The measure also extends to some other local revenues and requires a two-thirds majority vote for new "special taxes."[57]

In addition, Proposition 13 gave the state government complete control over property tax rates and the authority to allocate local property tax revenues in order to equalize school funding.[58] It thus eroded local control according to many observers.[59] Local budgeting became a process little understood by either citizens or local officials.[60] Local governments began competing for the local sales tax base and local governments subsequently turned to greater reliance on local sales taxes and user fees.[61] In 1996 voters passed Proposition 218, which limits local governments' use of service charges and assessments.[62]

C. Massachusetts

Proposition 2½ was passed by referendum in Massachusetts in 1980.[63] Local property taxes were capped at 2.5% of real property

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51. Alvin D. Sokolow, *The Changing Property Tax in the West: State Centralization of Local Finances*, PUB. BUDGETING & FIN., Spring 2000, at 85, 92.

52. Kirk J. Stark & Jonathan Zasloff, *Tiebout and Tax Revolts: Did Serrano Really Cause Proposition 13?*, ST. TAX NOTES, Nov. 24, 2003, at 701–26.

53. Carol Douglas, *Proposition 13—25 Years Later*, ST. TAX NOTES, Oct. 20, 2003, at 222.

54. *Id.*

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.*

59. *Id.*

60. Sokolow, *supra* note 51, at 98.

61. Douglas, *supra* note 53, at 224.

62. Sokolow, *supra* note 51, at 96.

63. Wallin, *supra* note 7, at 35.

value,[64] a tax break of $550 million—$347 million in property taxes and $200 million in car excise taxes.[65] Cities and towns above the limit were given three years to cut their rates.[66] Nominal annual growth in property tax revenues is limited to 2.5%, unless a vote of the residents allows a greater increase.[67]

Proposition 2½ has been amended several times.[68] In 1981, the legislature allowed property taxes on new construction to be added to the allowed annual 2.5% increase in assessments.[69] Originally, a two-thirds majority vote was required to increase the 2.5% limit. This was reduced to a majority vote.[70] To clarify, citizens may vote to allow the assessments to increase by more than 2.5%, but property taxes cannot exceed 2.5% of market value.[71] In 1986, a cap on state revenues was approved.[72] Growth in revenues was capped at the rate of growth in wages and salaries.[73] Excess revenues, up to 5% of state revenues, are directed to a rainy day fund, and additional revenues are returned to taxpayers.[74]

To make up for the anticipated (and actual) loss in revenues, many localities that had resisted assessing at full market value reassessed.[75] Municipalities also increased their reliance on fees.[76] At the same time, public school enrollments dropped, somewhat easing the constraints on schools.[77] While the state originally increased aid to local governments, when Massachusetts went into recession in the early 1990s, state aid was cut 30% in two years.[78] During the recovery, state aid rose but fell again in the recession of 2002.[79] When investigating the impacts of

64. *Id.* at 39.
65. *Id.* at 41.
66. *Id.* at 39.
67. Katherine L. Bradbury et al., *Property Tax Limits, Local Fiscal Behavior and Property Values: Evidence from Massachusetts under Proposition 2½*, 80 J. PUB. ECON. 287, 288 (2001).
68. Wallin, *supra* note 7, at 42.
69. *Id.*
70. *Id.* at 42–43.
71. *Id.* at 43.
72. *Id.* at 45.
73. *Id.*
74. *Id.*
75. *Id.* at 41.
76. *Id.* at 42.
77. *Id.*
78. *Id.*
79. *Id.*

Proposition 2½, Bradbury, Mayer, and Case found that "house prices performed worse in communities that had slower increases in spending, suggesting that Proposition 2½ led communities to spend 'too little' on services." [80]

D. Colorado

Colorado has a history of increasing restrictions on public budgets. "[In] 1977, growth in Colorado's general fund spending was limited to 7 percent over the prior year's spending."[81] Excess revenue was allocated first to a reserve fund and then to property tax relief.[82] This "spending limit was amended in 1991 (the Arveschoug-Bird provision) to limit annual appropriations to the lesser of five percent of Colorado personal income or 6 percent over the prior year's general fund appropriations."[83]

The Taxpayer's Bill of Rights passed in 1992 imposed additional constraints: (1) any new tax or tax rate increase must be approved by voters; (2) revenue collections are tied to the collections of the previous year plus the growth in population and the inflation rate (local governments can include new construction); (3) spending is limited to a percentage growth (based on the Arveschoug-Bird provision above); and (4) taxation options, such as new tax structures like local income tax and state property tax, among others, are also limited.[84]

Excess revenues of up to 3% of the general fund are allowed for reserves. Their use, however, must be repaid in the following fiscal year. This provision effectively means that the reserves are less of a rainy day fund and more of a cash-flow reserve.[85] The rapid repayment provision makes the use of a reserve fund difficult during a recession because there is no assurance that recovery would be sufficient to repay the fund in the next fiscal year. The mandated refund of surpluses went predominantly to the highest income taxpayers;[86] the maximum refund allowed for low-income individuals and families was $388 due to the structure of the earned income tax credit from federal income tax law.[87] Taxpayers reporting annual income less than $26,000 received an

80. Bradbury *supra* note 67, at 289.

81. McGuire & Rueben, *supra* note 7, at 460–61.

82. *Id.*

83. *Id.* at 460.

84. Bell Policy Center, *supra* note 9, at 1123–24.

85. National Conference of State Legislatures, Talking points on TABOR, http://www.ncsl.org/programs/fiscal/taborpts.htm (last visited Feb. 5, 2006).

86. Bell Policy Center, *supra* note 9, at 1136.

87. *Id.* at 1123.

average refund of $252, while the average refund for those reporting annual income of more than $126,000 was $1630.[88]

> In 2000, voters passed Amendment 23, which earmark[ed] revenue equal to one-third of 1 percent of Colorado taxable income for a State Education Fund. . . . In general, the interaction between Amendment 23 and TABOR [resulted] in more required spending on education and less revenue for other categories of spending.[89]

As a result of severe state budget constraints imposed by TABOR, in November 2005, voters approved Referendum C.[90] Referendum C suspends the TABOR revenue limit for five years (excess revenues do not need to be returned to taxpayers),[91] and changes the growth factor to apply to the prior year's limit on revenue growth rather than actual revenue collected in the prior year.[92]

McGuire and Rueben address the economic impacts of TABOR on the Colorado economy. Although there is some limited evidence that TABOR had a positive effect on employment growth in the five years immediately following passage of the law, that "short-run effect was not sustained into the second half of the decade. Indeed, Colorado's employment growth between 1998 and 2003 was far below those of comparable states."[93]

III. REVIEW OF THE TEL LITERATURE

Proponents of TELs argue not only that government spending is too high and needs to be lowered, but also that lower government spending will increase economic growth. As noted above, the majority of the empirical literature focuses on the fiscal implications of TELs—the revenue and expenditure changes, if any. A much smaller number examine changes in fiscal processes and institutions, if any, as a result of TELs. Further, most of the empirical literature focuses on local government TELs, in part because there is a longer history of TELs at

88. *Id.*
89. McGuire & Rueben, *supra* note 7, at 461.
90. *Id.*
91. *Id.*
92. *Id.*
93. *Id.*

that level. The empirical literature on the economic effects of TELs is very limited, as noted above.

A. Fiscal: Budget

Economic theory finds that the profit motive leads the private sector to efficiently allocate resources, in other words, to produce the highest value (as determined by consumers) output for the lowest value of inputs. When resource allocation is efficient, the marginal costs of an additional unit of output will be equal to the marginal benefits of that unit to the consumer. Absent a profit motive in the public sector, there are several hypotheses about how public budgets are determined and whether they meet the test of efficiency in the allocation of resources—do the marginal costs of producing an additional unit of public service equal the marginal benefits of that service to citizens?

Focusing on efficiency ignores that the public sector has objectives in addition to efficiency. In fact, the public sector is in place, in part, to provide the goods and services the private sector does not find profitable to provide, but which consumers demand. The public sector also has other objectives, such as equity, because the market does not guarantee equity, but citizens also demand it.[94] Cameron's Law suggests that the increasing openness of the economies of the world creates a demand for budgetary stabilization of the erratic fluctuations of markets, necessitating larger budgets.[95] This is another example of an objective for the public sector which the market cannot provide.

At the same time, the value of the output of the public sector is difficult to measure. Thus, citizens may not know if the public budgets are well administered or not. Citizens are subject to *fiscal illusion* about the costs and the benefits of public services.[96] In attempting to discover why TELs are supported by citizens, Lowrey and Sigelman found evidence that citizens feel that taxes are too high for the level of benefits, yet at the same time, citizens do not know what governments do, or do not do.[97] In general, citizens respond that they are happy with the services they receive, but they want the same services for lower

94. JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR 92 (2nd ed. 1988).

95. Kok Kheng Yeoh, *Ethnic Fragmentation and the Size of the Public Sector: Theoretical and Empirical Perspectives*, 3–4 n.2 (Univ. Malaya, FEA Working Paper No. 2001–5, 2001), *available at* http://www.cassey.com/fea2001-5.pdf.

96. Steven C. Deller, *Modeling the Public Sector, in* COMMUNITY POLICY ANALYSIS MODELING 97, 114–15 (Thomas G. Johnson et al. eds., 2006).

97. David Lowery & Lee Sigelman, *Understanding the Tax Revolt: Eight Explanations*, 75 AM. POL. SCI. REV. 963, 965–66 (1981).

taxes. Cutler, Elmendorf, and Zeckhauser find evidence that voters in Massachusetts are unhappy with the stringency of the limits of Proposition 2½.[98]

One argument is that budgets in general are of the appropriate size because if they do not meet the demands of citizens, which include the demand that they are well-administered, citizens will vote the officials out of office. It should also be noted that most public services are normal goods; as incomes go up, citizens demand more and better quality public services.[99] This does not mean that demand rises at the same rate as income.[100] For some goods, demand may rise more slowly than does income, while for others, it may rise more rapidly.[101] Thus, an increasing public budget is not prima facie evidence that the budget is inefficient.

On the other hand, the median voter model suggests that when citizens vote, it is the preference of the median voter that rules. All of those who want more than what the median voter wants will vote in favor, and those who want less will vote against. This suggests that at all times, roughly half the voters will think government is too large, and roughly half will think it is too small.

Several hypotheses suggest that public budgets will be larger than the optimum for social welfare. The following summarizes the major ones. Agency theory suggests that bureaucrats have jobs with high levels of discretion, making it difficult to supervise them.[102] Thus, they will seek to maximize their budgets as a way to increase their self-importance. This is sometimes referred to as the Leviathan hypothesis, or more colloquially, "bloated government."[103] Another hypothesis is that interest groups provide votes to elected officials, and in return, officials support specific budget items for the benefit of the interest group.[104] A related argument is that budgets increase when there is an

98. David M. Cutler et al., *Restraining the Leviathan: Property Tax Limitations in Massachusetts*, 71 J. PUB. ECON. 313, 327 (1999).

99. Reschovsky, *supra* note 10, at 146.

100. *Id.*

101. *Id.*

102. Cutler et al., *supra* note 98, at 319–20.

103. This hypothesis is also referred to as the Niskanen or Buchanan hypothesis and is a central tenet of the public choice school of thought.

104. Cutler et al., *supra* note 98, at 320.

economic or social shock, but do not return to previous levels when the shock recedes.[105]

While many hypotheses attempt to explain the size of public budgets, only a few attempt to directly tie the public budget to economic growth. One argument is that if the public budget is inefficient, it is using resources that could be used elsewhere to better benefit society. Another implicitly assumes that the public budget will outbid the private sector for resources (such as a public wage premium). This will increase costs to the private sector, lowering private investment and employment. This argument seems to be based on the implicit assumption that the private use of the money is more productive than the public use. A few hypotheses draw more direct links to the relative size of public budgets and economic growth and will be discussed below.

B. Fiscal: Processes and Institutions

Mullins argues that, on the whole, local TELs have more impact on the process of local government than on local budgets.[106] Local governments will look for ways to relieve their fiscal constraints by increasing sales taxes, fees, and charges if these are permitted.[107] They may also increase the use of special districts for funding of services or for economic development.[108] The use of special districts can confuse local voters as they no longer understand which government controls what and who is responsible.[109] This leads to diffusion of authority and perhaps less voter oversight, a version of *fiscal illusion*.[110]

Mullins goes on to argue that these second-best solutions, adopted because of the constraints imposed by TELs, lead to inefficiencies because of the time and effort put into devising and using an alternative rather than determining the best way to achieve the goal.[111] The use of these second-best alternatives also has consequences. For example, the increasing reliance on sales tax revenues by local governments increases

105. As noted by Yeoh, these perspectives are at times referred to as Peacock's and Wiseman's law. Yeoh, *supra* note 95, at 3 n.2.

106. Mullins, *supra* note 38, at 113.

107. *Id.*

108. *Id.*

109. Deller, *supra* note 96, at 114–15.

110. *Id.*

111. Mullins, *supra* note 38, at 118.

sprawl, which increases the costs of providing public services.[112] If the use of special districts results in less voter oversight, budgets may become larger and less well managed.

An additional major change in fiscal processes can happen if TELs that apply to local governments pass power from the local government to the state. California's Proposition 13 basically passed control of property tax revenues to the state. At the same time, because people have paid their property tax, they are confused when local services are not up to their expectations. These changes point to fiscal illusion—local taxpayers are not sure where their tax dollars are going.[113] The flow of their taxes to the state and the flow from the state back to local governments confuses voters, perhaps causing fiscal illusion, which can introduce significant inefficiencies in the provision of public services.[114]

C. Economic Impacts of TELs

Baumol argues that productivity increases more slowly in the public than in the private sector because the public sector mainly provides services.[115] Services would become progressively more expensive relative to physical goods because of low productivity growth in services and because wage increases from more productive sectors would inevitably flow into the service sector.[116] In fact, labor itself is the object of consumption in much of the service sector, and thus, productivity will increase only slowly.[117] Labor-intensive services, such as health care, cannot substitute capital for labor as efficiently as the general economy, so the cost of producing them goes up faster than general inflation. Government ends up taking on these "inefficient" services—public safety, education, long-term care, and other care-based health services.[118] Thus, Baumol's argument is that wage increases in the private sector due to productivity increases will force the public sector (and the private service sector) to pay higher wages even though their

112. BROOKINGS INST. CTR. ON URBAN AND METRO. POLICY, GROWTH IN THE HEARTLAND: CHALLENGES AND OPPORTUNITIES FOR MISSOURI 4 (2002), *available at* http:www.brook.edu /es/urban/Missouri/Mo1-16.pdf.

113. Douglas, *supra* note 53, at 224.

114. *See* Deller, *supra* note 96, at 114–15.

115. *See* WILLIAM J. BAUMOL & WILLIAM G. BOWEN, PERFORMING ARTS—THE ECONOMIC DILEMMA 162–72 (1966).

116. *See id.* at 169–71, 180.

117. *See id.* at 171.

118. *See generally id.*

productivity is not increasing as rapidly.[119] Baumol goes on to state that the final outcome for public budgets may be fewer social services even though per capita incomes are growing.[120]

The literature examining the relationships between tax and expenditure limitations and economic activity is surprisingly sparse.[121] As outlined above, the vast majority of the literature is focused on how TELs have impacted state and local governments from a purely fiscal perspective. However, there are many speculative assertions; for example, in Mason's review of the Colorado Economic Futures Panel, he concludes that TELs "fail to realize that wise public investments can pay big dividends in creating a healthy economy and attracting job growth and business investment."[122]

Only two studies of which we are aware provide a rigorous examination of the issue, and both have a narrow focus.[123] McGuire and Rueben[124] focus on the impact of TABOR on the Colorado economy, and Poterba and Rueben[125] focus on employment in the public sector as well as public sector wages in comparison to the private sector (i.e., the public sector wage premium).

McGuire and Rueben concluded that Colorado's TABOR had little if any impact on the long-term economic growth, measured in terms of both employment and per capita income.[126] They observed a short-run positive impact, but over time that positive influence disappeared.[127] Although Poterba and Rueben look at a larger geographic area, they focus only on public sector employment and wages.[128] States with more restrictive TELs on local governments tend to have a lower public wage premium and lower rates of growth in public sector employment.[129] The public wage premium is particularly important in many communities because public sector jobs tend to have higher levels of wages, salaries,

119. *Id.* at 179.

120. *See generally id.*

121. *See* McGuire & Rueben, *supra* note 7; *see also* Poterba & Rueben, *supra* note 27.

122. K.C. Mason, *Panel's Report: Tax Limitations Jeopardize State's Economic Future*, ST. TAX NOTES, Aug. 15, 2005, at 487, 488.

123. *See* McGuire & Rueben, *supra* note 7; *see also* Poterba & Rueben, *supra* note 27.

124. McGuire & Rueben, *supra* note 7.

125. Poterba & Rueben, *supra* note 27.

126. *See generally* McGuire & Rueben, *supra* note 7.

127. *Id.*

128. Poterba & Rueben, *supra* note 27, at 385.

129. *Id.*

and benefits packages.[130] In smaller and more rural communities, public sector jobs are often the "best" jobs available.

In general, research finds that local TELs, because of their emphasis on limiting property taxes, tend to negatively affect school districts[131]—the local government most dependent on property taxes and which also uses large amounts of highly-skilled labor. Research shows that particularly student's math scores are negatively affected in districts subject to TELs.[132] There is also some evidence that states with limits tend to draw reduced quality entrants into the teaching force.[133]

While Baumol focused on how the private sector affects public budgets,[134] another body of literature focuses on how public budgets affect the private sector. In general, these focus on taxes as a cost to business. Any cost to business, such as labor costs, can reduce returns to investment. For any cost, the firm focuses on what the cost gets it—labor produces output and a higher unit cost of labor might result in higher output and a lower cost of labor per unit of output. Taxes provide public services to the firm, which may lower its private costs of doing business. A firm will treat taxes as a cost and look for its lowest cost for the public services it needs.

C. Relationships Between Taxes and Economic Activity

As discussed above, the relationship between taxes and expenditures and economic activity has been a hot topic of political, popular, and academic debate for decades. Beginning with the classic Samuelson-Tiebout debate concerning the efficiency of markets to determine optimal levels of public taxation and spending, academics and

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130. *Id.* at 384.

131. *See* David N. Figlio, *Did the "Tax Revolt" Reduce School Performance?* 65 J. PUB. ECON. 245, 266 (1997); Thomas A. Downes & David N. Figlio, *Do Tax and Expenditure Limits Provide a Free Lunch? Evidence on the Link Between Limits and Public Sector Service Quality*, 52 NAT'L TAX J. 113, 117–18 (1999) [hereinafter Downes & Figlio, *Do Tax and Expenditure Limits Provide a Free Lunch?*]; Thomas A. Downes & David N. Figlio, *School Finance Reforms, Tax Limits, and Student Performance: Do Reforms Level Up or Dumb Down?* 34 (Inst. For Research on Poverty, Discussion Paper No. 1142–97, 1997) [hereinafter Downes & Figlio, *School Finance Reforms*], *available at* http://www.irp.wisc.edu/publications/dps/pdfs/dp114297.pdf; Thomas A. Downes et al., *Do Limits Matter? Evidence on the Effects of Tax Limitations on Student Performance*, 43 J. URB. ECON. 401, 412–14 (1988).

132. Downes & Figlio, *Do Tax and Expenditure Limits Provide a Free Lunch?*, *supra* note 131, at 117–18; Downes & Figlio, *School Finance Reforms*, *supra* note 131, at 34; Downes et al., *supra* note 131, at 412–14.

133. Downes & Figlio, *Do Tax and Expenditure Limits Provide a Free Lunch?*, *supra* note 131, at 120–21.

134. BAUMOL & BOWEN, *supra* note 115.

policymakers have struggled to define and apply appropriate rules. Parallel to the purely public finance question is the issue relating taxation levels to economic activity. Advocates of economic growth often are vocal critics of taxes.[135] Arguments are made that "excessively high" tax burdens hinder business growth and that reducing tax rates will spur growth sufficient to offset lost revenues. This line of reasoning was made popular under the Reagan Administration's policy of supplied-side economics and is embodied in the notion of the Laffer-Curve.

Taxes, however, are used to fund important public goods and services that are vital to the proper functioning of the local economy. Investment and maintenance expenditures in transportation systems, waste-water treatment facilities, police and fire protection, public educational services, and, increasingly, services that support more subtle forms of quality of life such as parks and recreational services, have been widely documented to enhance economic growth and development. Debates at the local level over government expenditure reductions are often heated with little support for elimination or significant reductions in any particular service. While the general public and the business community are generally in favor of tax reduction, widespread disagreement usually erupts when spending cuts are considered.

Ladd identifies five benchmark studies documenting the progression of the thinking about local taxes and their impact on economic growth:[136] Due,[137] Oakland,[138] Wasylenko,[139] Newman and Sullivan,[140] and Bartik.[141] In his 1961 survey of the literature on firm location, a common means to examine economic activity, Due concluded that: "While the

135. *See* BARTIK, *supra* note 19, at 36–37.

136. LADD, *supra* note 19, at 83–84.

137. John F. Due, *Studies of State-Local Tax Influences on Location of Industry*, 14 NAT'L TAX J. 163 (1961).

138. William H. Oakland, *Local Taxes and Intraurban Industrial Location: A Survey, in* METROPOLITAN FINANCING AND GROWTH MANAGEMENT POLICIES 13 (1978).

139. Michael J. Wasylenko, *Evidence of Fiscal Differentials and Intrametropolitan Firm Relocation*, 56 LAND ECON. 339 (1980) [hereinafter Wasylenko, *Evidence*]; Michael J. Wasylenko, *The Location of Firms: The Role of Taxes and Fiscal Incentives, in* URBAN GOVERNMENT FINANCE 155 (1981) [hereinafter Wasylenko, *Location of Firms*].

140. Robert J. Newman & Dennis H. Sullivan, *Econometric Analysis of Business Tax Impacts on Industrial Location: What Do We Know, and How Do We Know It?*, 23 J. URB. ECON. 215 (1988).

141. Timothy J. Bartik, *The Effects of State and Local Taxes on Economic Development: A Review of Recent Research*, 6 ECON. DEV. Q. 102 (1992).

statistical analysis and study of location factors are by no means conclusive, they suggest very strongly that the tax effects cannot be of major importance."[142] Due based his conclusion that taxes are inconsequential for firm location decisions on the finding that taxes account for such a small percentage of operating costs.[143] He concluded that other costs associated with labor, land, and transportation dominated the effects of any small variation in taxes across locales.[144] In his update of Due's earlier work, Oakland accepted without question the conventional wisdom founded by Due that taxes have little effect on interstate or interregional location decisions.[145]

Wasylenko expanded the discussion of taxation and local economic activity by explicitly examining the notion of intraregional competition for firms.[146] While the interpretation of the literature by Due and later by Oakland concluded that taxes account for little in a firm's decision to locate in one state or metro area over another, they did not address the role of taxes in the selection of one locale within a metro area, for example, over another within the same metro area.[147] Citing a limited number of statistical studies, Wasylenko concludes that statistical evidence identifying a marginal role taxes play in intraregional firm location is outweighed by other more relevant factors.[148] Wasylenko suggests that the limited role taxes may play is due to the limited variation in taxes across regions.[149] While Wasylenko attempts to address this latter issue, he concludes that our thinking about and measuring relative tax burden needs to be refined.[150]

As noted by Ladd, the 1980s witnessed a proliferation of statistical studies challenging the conventional wisdom advanced by Due and reaffirmed by Oakland.[151] Newman and Sullivan's attempt to summarize this newer work found three distinct approaches: general equilibrium, partial equilibrium adjustments, and dynamic adjustment models.[152] Because of the escalation of studies and approaches,

142. LADD, *supra* note 19, at 83 (quoting Due, *supra* note 137, at 170).
143. Due, *supra* note 137, at 171.
144. *Id.* at 167.
145. LADD, *supra* note 19, at 86.
146. Wasylenko, *Location of Firms*, *supra* note 139, at 156.
147. Due, *supra* note 137, at 166–67; Oakland, *supra* note 138, at 28.
148. Wasylenko, *Location of Firms*, *supra* note 139, at 186–87.
149. *Id.* at 186.
150. *Id.* at 185.
151. LADD, *supra* note 19, at 89.
152. Newman & Sullivan, *supra* note 140, at 219–21.

Newman and Sullivan conclude that the impact of local fiscal policy, taxes in particular, on economic activity through firm location "should be treated as an open rather than a settled question" and are encouraged by the introduction of new theoretical approaches, empirical data, and sophistication of econometric methods.[153]

Perhaps the most influential review of this literature was conducted by Bartik. Using a modified delphi method summarizing fifty-seven empirical interregional and twenty-five intraregional studies conducted since 1979, Bartik provides compelling evidence that taxes do matter in economic growth.[154] While previous reviews of the literature discussed individual studies, Bartik's use of delphi methods allows for systematic "averaging" of results across studies.[155] While individual studies may have limitations, there would have to be serious systematic error cutting "across all studies for the consensus results to be invalid."[156] In striking contrast to the previous reviews of the literature, Bartik concluded "that taxes have quite large and significant effects on [economic] activity."[157] Of the fifty-seven interregional studies reviewed, 70% reported at least one statistically significant negative effect of taxes on one or more measures of economic activity such as employment, output, or business capital.[158] Ladd argues, "this observation alone suggests that the conventional wisdom that taxes do not matter deserves to be questioned."[159]

More recently, Pjesky attempted to replicate and expand on what he identified as five "influential" studies that support the new conventional wisdom that taxes at the local (state) level do matter for regional economic performance[160]: Vedder,[161] Becsi,[162] Helms,[163] Mofidi and

153. *Id.* at 232.

154. Bartik, *supra* note 141.

155. *Id.* at 103.

156. LADD, *supra* note 19, at 92.

157. *Id.*

158. *Id.*

159. *Id.*

160. Rex J. Pjesky, *What Do We Know About Taxes and State Economic Development? A Replication and Extension of Five Key Studies*, 32 J. ECON. 25, 26 (2006).

161. *Id.* at 27 (citing Richard Vedder, Taxation and Econ. Growth: Lessons for Oklahoma (1996) (unpublished contract study, Office of State Finance, State of Oklahoma)).

162. *Id.* at 27–31 (citing Zsolt Becsi, *Do State and Local Taxes Affect Relative State Growth?*, 81 FED. RES. BANK ATLANTA ECON. REV. 18–36 (1996)).

163. *Id.* at 31 (citing L. Jay Helms, *The Effect of State and Local Taxes on Economic Growth: A Time Series-Cross Section Approach*, 67 REV. ECON. & STAT. 574 (1985)).

Stone,[164] and Carroll and Wasylenko.[165] Through Pjesky's replication effort, he concluded that the estimated tax effects identified in these five studies were sensitive to model specification and time periods examined.[166] In several alternative specifications of the models, Pjesky found that tax prices had a positive, not negative, and significant impact on regional economic growth.[167] Pjesky concluded that due to a range of empirical and theoretical short comings of the literature, we cannot make any definitive statements about the relationship between local taxes and regional economic activity.[168] Pjesky suggests that perhaps McGuire best summarizes our current understanding in "that we are uncertain about the effects of economic development policies, including broad state fiscal policy, on economic growth."[169]

White suggests that Due's conventional wisdom and Bartik's challenge may both be right.[170] She argues that the idea of firms becoming more sensitive to taxes over the past thirty or forty years is intuitively appealing.[171] According to White, first-order effects, such as labor, land, and transportation costs, vary less across regions now than they did in the past.[172] Because firms have become more footloose, second-order effects, such as taxes, probably have become more important.[173] Thus, both Due and Bartik may be correct. Perhaps more important is the increased incidence of tax incentives at the local level to influence firm locations. State and local governments are more willing today to "go to war" to attract, retain, and promote economic growth with tax incentives as a primary tool of war. In the end, taxes do have a weak negative effect on economic activity, but more important is how those tax dollars are spent.

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164. *Id.* at 32 (citing Alaeddin Mofidi & Joe A. Stone, *Do State and Local Taxes Affect Economic Growth?*, 72 REV. ECON. & STAT. 686 (1990)).

165. *Id.* at 32 (citing Robert Carroll & Michael Wasylenko, *Do State Business Climates Still Matter?—Evidence of a Structural Change*, 47 NAT'L TAX J. 19 (1994)).

166. *Id.* at 36–37.

167. *Id.* at 36.

168. *Id.* at 37

169. *Id.* at 37 (quoting Therese J. McGuire, *Who Benefits From State and Local Economic Development Policies?*, 45 NAT'L TAX J. 457, 458 (1992) (reviewing BARTIK, *supra* note 19)).

170. Michelle J. White, *Comment: Effects of Taxes on Economic Activity, in* LOCAL GOVERNMENT TAX AND LAND USE POLICIES IN THE UNITED STATES: UNDERSTANDING THE LINKS 108, 108–15 (1998).

171. *Id.*

172. *Id.*

173. *Id.*

Wasylenko, in a second review of the literature on the link between taxation and economic growth published at about the same time as Ladd, points out that even though there are a large number of studies, their results are not yet conclusive, and the effects of taxes may be changing over time.[174] Estimates of interregional tax elasticities vary over time, such as the source of data and variables used—employment, income, investment, or firm locations.[175] The estimates suggest that a 10% decrease in taxes will increase employment, investment and firm births between 1% and 6%.[176] When only business taxes are used, a 10% decrease in taxes increases economic activity between 0% and 2.6%.[177] Contrary to White, Wasylenko finds that over time tax differences between states have become less important in employment growth, perhaps because states have adopted similar tax systems.[178] The intraregional tax elasticities are about four times higher than the interregional elasticities.[179] Once a firm has narrowed its search to a region, cost variations, other than taxes, are likely to be minimal.[180] This increases the firm's responsiveness to tax differentials.[181]

At the same time, following a general strategy of low corporate income tax rates does not guarantee long-term economic success. A lower corporate rate reduces the cost of capital and leads to substitution of labor for capital by all firms.[182] At the same time, the firms that find the lower tax rate a sufficient incentive to relocate are the less capital intensive firms because their re-location costs are relatively low.[183] States with lower corporate income tax rates have more labor-intensive manufacturing, using low-wage, unskilled labor, than do states with higher rates because the low-tax incentive for relocation by labor-intensive firms "counteracted the capital upgrading [of] firms already there."[184] Southern states, which led in the drive for lower corporate tax rates, starting with the Mississippi Balancing Agriculture with Industry

174. Wasylenko, *supra* note 19, at 37–38.

175. *Id.* at 39.

176. *Id.* at 45.

177. *Id.*

178. *Id.* at 47.

179. *Id.*

180. *Id.* at 49.

181. *Id.*

182. Jonathan C. Rork, *Getting What You Pay For: The Case of Southern Economic Development*, 35 J. REG'L ANALYSIS & POL'Y 38, 38 (2005).

183. *Id.*

184. *Id.*

("BAWI") action initiated in the Great Depression,[185] increased employment in the short run, but they also more recently became particularly vulnerable to jobs moving overseas.

A large, but somewhat inconclusive, amount of literature on taxation and economic growth can be found. While overall the literature suggests that lower taxes may increase economic growth, the range of estimates is quite large.[186] In addition, there may be different effects in the short run and the long run, as suggested by Rork.[187] The intent of the analysis presented in this Part of the study is to address three issues. First, what is the relationship between levels of taxes and expenditures on economic activity as measured by per capita income? Second, we return to our simple examination of public sector employment discussed above and look at correlates between the size of the public sector, measured in terms of employment, and overall employment growth. We then turn to the question of whether tax and expenditure limitations have any role in explaining growth in per capita income.

IV. DESCRIPTIVE ANALYSIS OF WISCONSIN

Wisconsin's current TEL limits apply only to the property tax. Counties and municipalities are entering the second year of a limit on their property tax levies. Under law, a county or municipality cannot increase its levy by more than the percentage change in net new construction or 2%, whichever is greater.[188] Debt and tax increments from tax increment financing ("TIF") districts are excluded from the levy limit.[189] Towns under 2000 in population can approve a resolution at the annual town meeting to exceed the levy limit.[190] In all other municipalities and counties, these limits can be lifted only through local referendum.[191]

Because Wisconsin does not have a municipal level optional sales tax and state law strictly limits how fees and charges can be structured and used, the prospect for these constraints to become binding is very high.[192] Exceeding the levy limit is penalized dollar for dollar by a

185. *Id.* at 41.
186. Bartik, *supra* note 141, at 103.
187. Rork, *supra* note 182, at 50–51.
188. WIS. STAT. § 66.0602 (2005–2006) (repealed Jan. 1, 2007).
189. *Id.*
190. *Id.*
191. *Id.*
192. *Id.*

decrease in state aid.[193] Wisconsin is somewhat unusual in the generous amount of state aid provided to local governments.

For school districts, property tax revenues are allowed to increase by about $241 per student, increasing over time by the rate of inflation.[194] In practice, this translates into about a 2% annual allowable increase in property tax revenues. A complicating factor in Wisconsin is what is referred to as "qualified economic offer" ("QEO").[195] That is, in contract negotiations, under some circumstances, the QEO is set at 3.8% annual increases in wages, salary, and benefits (including health care).[196] Given that the largest share of a school district's budget is devoted to teachers and professional teaching staff, the 3.8% QEO, coupled with an effective 2% increase in property tax revenues, has caused profound structural deficits in many Wisconsin school districts.[197]

One of the factors driving the tax and expenditure limitation efforts in Wisconsin is the state's reputation as a high-tax, and hence high-spending, state.[198] Historically, Wisconsin has been progressive in terms of its commitment to offering a wide range of services and has taken pride in the quality of its public educational system, including K–12 education, and its public university system and network of technical schools.[199] While college entrance exams, such as the ACT and SAT, are but only one measure of student performance, on average, Wisconsin high school students consistently rank in the top five in the nation, and in some years (e.g., 2004), Wisconsin test scores rank the highest in the nation.[200] The University of Wisconsin – Madison is proud of the fact that it ties Harvard University with the most Fortune 500 corporations that have UW alumni as Chief Executive Officers ("CEOs").[201] The progressive ideas that drove much of these investments in public services maintained that services should be open to as many of the

193. *Id.*

194. Andrew Reschovsky, *Wisconsin's School Finance: A Policy Primer*, ST. TAX NOTES, Feb. 17, 2003, at 608–16.

195. *Id.*

196. *Id.*

197. *Id.*

198. Reschovsky, *supra* note 10, at 137–38.

199. Dale J. Knapp & Todd A. Barry, Wis. Taxpayer's Alliance, Why Are Wisconsin's Taxes High?, 5–6 (2003), http://www.wistax.org/news_releases/2003/why%20high%20taxes.pdf.

200. Press Release, Wis. Dep't of Pub. Instruction, SAT Scores Up, State's Graduates Among Tops in the Nation (Aug. 30, 2005).

201. University of Wisconsin – Madison, Intersection of Business and Research Explored at CEO Summit, Oct. 3, 2006, http://www.news.wisc.edu/12947.html.

citizenry as possible. As such, the idea of relying on fees and user charges, such as the adoption of a toll road system that is so common throughout states in the northeast United States, was in conflict with the progressive philosophy. The combined elements of the progressive philosophy and commitment to quality resulted in high taxes.[202] The question we want to address is whether the perception that Wisconsin remains a high tax and spend state with bloated government employment has some basis in numbers.

To address the issue of the level of state and local taxes and spending, we use two sources of information. The first is the U.S. Census Bureau statistics on state and local government finance for 2004, the most current year with detailed tax and expenditure data available for all fifty states.[203] The second is employment data from the Bureau of Economic Analysis Regional Economic Information System ("BEA-REIS").[204] While state comparisons of taxes and expenditures are widely available as the source of numerous popular press articles in Wisconsin as well as other states, comparison of public sector employment is not as widely available. We consider the financial and then employment data in turn.

Within the public finance literature, there are two common ways in which to analyze state and local government fiscal burden. One is to compute taxes and expenditures on a per person or per capita basis. However, per capita comparisons do not really allow us to address the argument that Wisconsin's tax and expenditure burden is beyond the state's ability to pay; that is, it does not take income into account. With the latter measure, if taxes and expenditures are calculated as a percentage of income, we can infer that for every dollar of income, a certain percentage goes to taxes and expenditures.[205] Higher tax and spending burdens would be reflected in taxes and spending as a higher

202. Knapp *supra* note 199.

203. U.S. Census Bureau, *supra* note 13.

204. Bureau of Economic Analysis, Local Area Personal Income, http://www.bea.gov/bea/regional/reis (last visited Mar. 30, 2007).

205. One complicating factor when computing tax and expenditures as a percentage of income is which measure of income is most appropriate. Some analysts use wage and salary income, while others use total personal income. A second problem is that different sources of income data use slightly different methods for estimating income. The problem then is that two different analysts can use different definitions of income from different sources and end up with different per income estimates. This has resulted in some confusion in Wisconsin where different analysts are reporting slightly different estimates and hence rankings. In political debates, the estimates that support predefined positions are used. For this research, we use total personal income as defined within the BEA-REIS.

percentage of income. While these comparisons are helpful, simple rankings do not allow us to address the relevant question, are tax and expenditure levels "too high," because this is a normative judgment upon which reasonable people can disagree.

Tax and expenditure levels per capita and as a percentage of income were computed for all fifty states and the District of Columbia, and Wisconsin's ranking is reported in Table 4.[206] The Census data provide great detail in terms of revenue and expenditure categories, far greater detail than is required for this analysis. Hence, we select some of the broader categories of revenues and expenditures for comparison. We will consider first sources of revenue then areas of expenditures.

For our discussion, we focus on four broad sources of revenue: income taxes, sales taxes, property taxes, and fees and charges. We do not consider intergovernmental transfers (grants in aid from the federal government or other states).[207] In general, taxes (property, income, and sales) account for 11.5% of total personal income in Wisconsin, which is higher than the national average of 10.4%.[208] This places Wisconsin in the top ten states in terms of tax burden with a rank of seventh. Wisconsin taxes per capita are $3714, versus the national average of $3447, but Wisconsin falls out of the top ten and ranks at thirteenth. The change in the rankings between per income and per capita is easily explained by the general level of income in Wisconsin when compared to the rest of the nation. Wisconsin's per capita income has historically ranked below the national average and, during the most recent recession, has fallen farther behind.[209] This observation might be used as evidence that income levels are not sufficient to support the level of services available in Wisconsin.

A closer look at the major taxes may provide insight into how Wisconsin ranks relatively high in terms of total taxes. Property taxes

206. State and local taxes and expenditures are combined because of differences between states in the allocation of taxing authority and public service responsibilities. For example, in some southern states, roads are the responsibility of states, while in other states, both the state and local governments share responsibility for roads. Thus, to compare just state spending on roads would be misleading.

207. The flow of federal dollars into the state has been a source of frustration for many in Wisconsin; the state has consistently sent more dollars to Washington, DC, than is received in grants in aid and contracts. Some have argued that the Wisconsin delegation in Washington has not been effective in "bringing home the pork," while others note that Wisconsin does not have much of a presence with the Department of Defense in terms of military bases or defense contractors.

208. *See infra* Table 4.

209. Knapp & Barry, *supra* note 199, at 15.

are 4.2% of personal income in Wisconsin, compared to 3.3% for the national average, or a ranking of eighth in the nation. This level of property tax, coupled with the general disdain for the property tax, may be one of the motivations for the current local TELs targeting property taxes in Wisconsin. Three percent of personal income in Wisconsin goes to personal income tax, compared to a national average of 2.2%, and 0.4% of personal income is dedicated to the corporate income tax, compared to 0.3% for the national average.[210] Wisconsin falls below the national average both in terms of the percentage of personal income going to sales tax as well as per capita burdens. This is partially a reflection of the fact that municipalities in Wisconsin are not allowed to impose a sales tax.[211]

In states that allow a local option sales tax, a large percentage of municipalities and counties (if permitted) have adopted the tax.[212] Three reasons have been advanced for the widespread use of a local option sales tax when allowed by state law. First, because of the wide disdain for the property tax, many municipalities see sales tax revenues as a substitute for property tax revenues. Second, sound taxation policy strongly suggests that the revenue base of the government must be able to grow with the economy. Because of the growth of the retail and service sectors, many municipalities have found that growth in the sales tax provides them with a growing source of revenues. Third, and the most relevant to the analysis presented in this study, is that as states impose strong restrictions (i.e., TELs) on property taxes, many municipalities are shifting away from the property tax to alternative sources of revenue, with a local sales tax proving to be very attractive.[213] Wisconsin does not allow a local option sales tax, so local governments cannot shift away from the property tax to the sales tax.

In addition to the general sales taxes, there are sales taxes on particular types of items such as motor fuel and the so-called "sin" taxes on tobacco and alcohol. In Wisconsin, the motor fuel tax, the revenues

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210. It is important to note that, technically, personal income does not directly pay the corporate income tax. The tax is paid by businesses, and one could argue that the tax subtracts from potential dividends paid to shareholders. But the location of those shareholders is generally unknown and they may reside outside of Wisconsin.

211. Counties are allowed to impose a 0.5% sales tax that piggybacks on the state sales tax. To date, fifty-nine out of seventy-two counties in Wisconsin have opted to impose a county sales tax.

212. *See, e.g.*, Cynthia L. Rogers, *Local Option Sales Tax (LOST) Policy on the Urban Fringe*, 34 J. REG'L ANALYSIS & POL'Y 27, 32 (2004).

213. Mullins, *supra* note 38, at 113.

of which are dedicated to highways and transportation, has historically had automatic increases tied to the inflation rate. This past summer, in response to the price of gasoline, that automatic increase was rescinded and now can only be increased by legislative action. Within weeks of the rescinding of the automatic increases, the Wisconsin Department of Transportation released a report stating that increased fuel and material costs have caused a massive deficit in the highway maintenance and construction fund.[214]

In addition to shifting toward sales taxes, many local governments across the nation that are limited by TELs on property taxes have been able to shift toward higher dependence on user fees and changes. Wisconsin tends to be close to, if not below, the national average on fees and charges, as presented in Table 4. Because of the strong progressive tradition in Wisconsin, the state has historically shied away from fees and charges. Indeed, Wisconsin takes great pride in not having toll roads. Further evidence that the progressive spirit remains strong in Wisconsin came with the proposal to allow libraries to compensate for the potential loss of state aid by imposing a fee for library cards. The uproar was deafening. The common argument against the proposal was that the predominant users of public libraries were the people who could least afford to pay a user fee, an argument in line with traditional progressive ideals. The Governor reluctantly withdrew the proposal, and library cards remain free in Wisconsin.[215]

A second complication for the adoption of user fees and charges is that Wisconsin law limits what a municipality and school district can do with such fees. Specifically, the Wisconsin Constitution mandates that K–12 public education be provided free to the residents of the state. Therefore, schools cannot impose tuition for normal classroom activities. In response to the fiscal constraints that the state has imposed

214. Studies that have looked at the status of the states' road conditions have generally found Wisconsin's highway system to be among the best in the nation. *But see, e.g.*, NORMAN WALZER & STEVEN C. DELLER, U.S. DEP'T OF AGRICULTURE, RURAL ROADS AND BRIDGES: CONDITION AND STATUS OF ROADS (1997), *available at* http://ntl.bts.gov/lib/12000/12100/12198/IIRA_Other_189.pdf (reporting on the status and condition of roads that are maintained by local town or county governments nationwide).

215. A common phenomena that we find when we work with smaller communities in economic development, inevitably one member of the community will raise the issue of high taxes hindering economic growth and development. When we rephrase the question about whether or not the community can afford the current level of services and we start soliciting ideas for what to cut, the tone of the discussion shifts very quickly. Without a doubt, all services that have any meaningful impact on the level of taxation are deemed too important to the community.

on K–12 public education, some school districts are imposing fees for extracurricular activities such as participation in sports and school clubs. In addition, the level of pressure for extracurricular clubs and groups to pursue fundraising is growing rapidly. By law, revenues from fees and charges can only be used for the municipal services that the fee is applied to; fees cannot be structured to generate a surplus for other uses. This limit greatly reduces the flexibility that fees and charges can provide to help offset the TELs placed on property taxes.

A focus on expenditures provides a slightly different picture than a focus on taxes. Direct expenditure by the state and all local governments is equal to 24% of personal income, slightly more than the national average of 23.3%, which ranks Wisconsin twenty-second in the nation.[216] On an expenditures per capita basis, Wisconsin is slightly below the national average ($7705 versus $7712). The specific areas of expenditures on which Wisconsin ranks highest include education, both K–12 and higher education, along with police protection and corrections. But it is important to note that none of these rankings place Wisconsin within the top ten states. One area of public expenditures that receives significant attention is administration. It is often presumed that too much is spent on administration, and that this is an area for cutting costs. Given the 2004 data, Wisconsin ranks thirty-seventh in terms of share of personal income spent on administration and thirty-ninth in terms of per capita spending. These data provide a strong challenge to the idea that there is significant administrative "bloat" in Wisconsin's administrative spending.

An alternative way to measure expenditures and the size of the public sector is to examine employment levels. If the Leviathan (or Niskanen-Buchanan)[217] government as outlined above exists, then wasteful and bloated government should be captured by the size of government employment relative to the overall size of the state's economy. Although a large share of government spending may take the form of transfers (e.g., public support programs or economic development grants), the provision of public services tends to be a labor-intensive enterprise. For our purposes here, we look at public sector employment, both at the state and local levels, between 1993 and 2004. The beginning of the period corresponds with the end of the early 1990's recession, and 2004 reflects the most current year of data available. All data are from the U.S. Department of Commerce's

216. *See infra* Table 4.

217. *See* Cutler et al., *supra* note 98, at 319–20.

Bureau of Economic Analysis's Regional Economic Information System,[218] and the results of our simple descriptive analysis are provided in Table 5.

If we consider the percentage of total employment in state government, the national average is 3%; for Wisconsin, it is 2.9%, ranking thirty-seventh in the nation.[219] Local government, which includes counties, municipalities, K–12 public schools, and special districts, accounts for a larger percentage of employment. At the national level, local governments account for 8.1% of total employment, and in Wisconsin, the share is slightly smaller, 8.0%, which ranks Wisconsin just below the median at twenty-sixth in the nation. Thus, public employment in Wisconsin appears typical to low in comparison with other states. If the proponents of Wisconsin's TABOR and WTPA are correct, we would expect to see Wisconsin's share of public sector employment much higher.

A second way to think about the problem is to look at how public employment levels have changed over time. Again, if government is responding as suggested by the Leviathan hypothesis,[220] the size of the public sector would be expected to be growing faster than the overall economy. As a baseline, consider total employment growth over the 1993 to 2004 period. National total employment grew by 20.1%, while Wisconsin's total employment grew at a slower rate of 17.2%, which places Wisconsin twenty-eighth in total employment growth when compared to the other states. Generally, state-level public employment grew more slowly than total employment. Nationally, state government employment grew by 10%, while in Wisconsin it grew at 5.4%, which is one of the slower paces among the fifty states (rank thirty-sixth). Local government employment grew at a faster rate than state government employment both for the nation (21.3%), as well as for Wisconsin (16%). Nationally, local government employment grew faster than total employment, but in Wisconsin, it grew more slowly than total employment. Despite the widespread use of TELs imposed on local governments throughout the nation, the demand for local public services seems to be growing.

Two observations can be drawn from the employment analysis. First, the relative size of Wisconsin's public sector is not out of proportion with the national average. Second, over time, the public

218. *See* Rogers, *supra* note 212.

219. *See infra* Table 5.

220. *See* Cutler et al., *supra* note 98, at 319–20.

sector share of total employment has been declining in Wisconsin. The analysis, presented in Table 5, is too general to conclude that the current restraints on the public sector in Wisconsin are having an effect, but the analysis does challenge the idea of government growth in Wisconsin.

The one conclusion that we can reach is that Wisconsin is highly dependent upon taxes as a source of revenue and local governments are not permitted to aggressively pursue alternative sources of revenues, such as user fees and charges. In addition, a recent attempt to be more aggressive with these alternative sources of revenue ran into opposition that comes from Wisconsin's traditional progressive ideas about the availability of services.[221] In a sense, the public demand is pitting the progressive philosophies of open access to public services against a more conservative philosophy on taxes. As noted by Citrin, along with Joyce and Mullins, Shapiro et al., and Granlich et al.,[222] people are generally satisfied with the current level of public services and would like to have higher level of services, but are simply unwilling to pay for them. In addition, Wisconsin's local governments are not permitted to pursue alternative tax revenue streams, and Wisconsin does not allow a local option sales tax.

A slightly different picture emerges when expenditures are examined. Wisconsin does not rank high on overall expenditures, but it does choose to dedicate higher levels of resources to some public services than do other states.[223] When the growth of public employment is compared to the growth in total employment, it is clear that public employment's share of total employment is declining.[224] This suggests that the government is not growing excessively.

V. THE SIZE OF GOVERNMENT AND THE IMPACT OF TELS ON ECONOMIC GROWTH

The intent of the analysis presented in this Part of the study is to address three issues. First, what is the relationship between levels of taxes and expenditures on economic activity as measured by per capita income? Second, we return to our simple examination of public sector

221. Knapp & Barry, *supra* note 199.

222. Jack Citrin, *Do People Want Something for Nothing: Public Opinion on Taxes and Government Spending*, 32 NAT'L TAX J. 113 (1979); *see* Edward M.D. Rubinfield Gramlich & D. Swift, *Why Voters Turn Out for Tax Limitation Votes*, 34 NAT'L TAX J. 115, 115 (1981); Perry Shapiro, David Puryear & John Ross, *Tax and Expenditure Limitation in Retrospect and in Prospect*, 32 NAT'L TAX J. 1, 3 (1979); Joyce & Mullins, *supra* note 30, at 241.

223. *See infra* Table 4.

224. *See infra* Table 5.

employment discussed above and look at correlates between the size of the public sector, measured in terms of employment, and overall employment growth. Third, we then turn to the question of whether tax and expenditure limitations have any role in explaining growth in per capita income.

A. Revenue and Expenditures and Per Capita Income

Our simple correlations of revenues and expenditures per income as well as per capita on per capita income levels in 2004 are presented in Table 6. Our central hypothesis flows from the position of the advocates of TELs that higher tax burdens are bad for the economy. But as noted by Bartik and Ladd, discussed above, looking at only the revenue side of the equation paints an incomplete picture. While the literature suggests that taxes may harm the economy, the services that taxes pay for help the economy.[225]

Consider first overall taxes as a percentage of income and taxes per capita. Both measures are associated with higher levels of per capita income. This result also holds for property taxes alone. Two observations are warranted. It would be a mistake to try and infer from simple correlation analysis that higher overall taxes as well as property taxes lead to higher levels of economic activity as measured by per capita income. Correlation does not lead to causation. But we can conclude that there are no "low tax–high income" states. Although we cannot draw a conclusion about causation, these simple results cast doubt on a central premise of TEL advocates that high taxes are necessarily bad for the economy.

When we examine the relationship between sales taxes and levels of per capita income, a slightly more complex picture becomes apparent. Sales taxes as a percentage of total income tend to be negatively correlated with overall per capita income, yet sales taxes per capita tend to be associated with higher levels of per capita income. One possible interpretation is based on research showing that sales taxes are regressive. Because in most states the sales tax tends to apply to goods and not services, this interpretation is plausible for many states. As income grows, a higher share of income is spent on services; hence, for high-income states, a smaller share of income is spent on taxable goods. Lower income persons, however, will tend to spend a higher percentage of their income on taxable goods. The positive correlation between

225. Bartik, *supra* note 141, at 107.

sales taxes per capita and per capita income again allows us to conclude that there are no "low tax–high income" states.

State and local income taxes also have a complex relationship to per capita income. Individual income taxes have a very weak positive association with per capita income when measured as a percentage of income, and a stronger positive relationship when measured in terms of income taxes per capita. While we cannot draw inferences about causation, we can again draw the conclusion that there are no "low tax–high income" states. A similar, albeit weak, conclusion can be drawn in terms of corporate income taxes as a percentage of personal income. User fees and charges have a strong negative association with levels of per capita income. What this latter result implies is that poorer states tend to rely more heavily on fees and charges to generate revenues. In summary, higher income states tend to rely more on taxes to generate revenues while poorer states tend to turn to fees and charges to generate revenues. This simple analysis does not allow us to make any inferences about the role of TELs.

When we examine expenditures, we have a mixed set of results, again pointing to the complexity of the relationship between taxes and expenditures and economic activity. Direct total expenditures as a percentage of income are not correlated with per capita income, but direct expenditures per capita have a strong positive association with per capita income. This latter pattern also holds for current operations expenditures and capital outlays. Given that expenditures are the flipside of revenues, it makes intuitive sense that higher income states tend to have higher levels of spending per capita. Again, we cannot draw the conclusion that higher levels of spending per capita cause higher levels of income. The strongest result we can draw is that higher income states tend to spend more per person than lower income states.

The results on education expenditures are surprising. When we consider education expenditures as a percentage of personal income, we find a negative relationship strongly suggesting that poorer states tend to spend a higher percentage of their income on educational services. This is particularly true for higher education, but the result is unclear (statistically insignificant) with K–12 education. On the other hand, there is a positive relationship between K–12 education spending per capita and per capita income. That is, lower income states spend a higher percentage of their income on public education, but higher income states spend more per person. The interested reader can explore the remaining correlations and draw their own inferences. But, the simple analysis presented in this Part tells us that the relationship

between taxes, other sources of revenue and expenditures and economic activity is a complex one. Policymakers should use caution when making broad generalizations about the relationship between taxes, expenditures, and economic activity.

B. Public Sector Employment and Economic Growth

As we outlined above, there are numerous ways in which to measure the size of government. The most common approach is to examine flows of dollars through revenue generation (taxes, fees, charges, etc.) and expenditures. Poterba and Rueben's study of the impact of TELs on public sector employment suggests that we can gain insights into the impact of government on economic growth by looking at patterns in public sector and total employment. Here, we take the descriptive analysis presented in Table 5 and search for correlations between public sector employment and total employment growth.

As reported in Table 7, six specific correlates were estimated. First consider overall growth in state as well as local government employment and how they relate to total employment growth over the period 1993 to 2004. As we expected from the simple descriptive analysis, there is a strong positive relationship between growth in government employment and total employment growth. Based on these simple correlations, it appears reasonable to conclude that local government employment grows at a faster rate than state government employment. From a policy perspective, these results strongly suggest that growth in public sector employment is a product of total employment growth. This makes sense if one thinks of public services as what economists refer to as a normal good. As the economy grows, the demand for public services, particularly local government services, also grows.

The question then becomes one of the rate of growth in the public sector relative to total employment growth. By correlating the change in public sector employment over the study time period with total employment growth over the same period, we find a strong negative statistical relationship. This result, coupled with the prior result, suggests that the public sector employment grows at a slower rate than total employment growth. Returning to Table 5, we find that growth in Wisconsin public sector employment is consistent with these findings, strongly suggesting that the growth in government is not "out of control" as the advocates of Wisconsin's TABOR-WTPA have maintained.

The final correlation analysis concerns the size of public sector employment in 1993 and its influence on total employment growth over the study period. If the promoters of TELs are correct, we would expect to find a negative relationship. In other words, states that have a higher percentage of total employment in state and local government should experience slower overall employment growth. Our simple statistical analysis presented here refutes that conclusion. While the estimated correlation is negative, it is very close to zero and cannot be statistically distinguished from zero. In other words, states that had a higher share of total employment in the public sector in 1993 did not experience a statistically different rate of total employment growth than those with a lower level of public employment.

The results of this simple growth analysis have straightforward policy implications. The overall size of public employment does not influence subsequent growth in total employment. As the economy grows, the demand for public services also grows, which means that employment in the public sector will also grow. The rate of growth in public employment, however, is slower than overall employment growth. The data for Wisconsin suggests that it is following the patterns observed in Table 7.

C. The Impact of TELs on Economic Growth

The analysis presented to this point has not addressed our central question: what is the impact of tax and expenditure limits on economic growth? To gain insights into this question we follow the approach of McGuire and Rueben by using panel data of the fifty states over the period 1987 to 2004.[226] Using regression analysis, we estimate a family of growth models to explain patterns in annual growth of per capita income.[227] The challenge we face is how to measure and introduce TELs into the growth models. As noted above, no two states are completely alike, but the proposed changes to the Wisconsin Constitution provide us with some guidance. The current limits imposed on Wisconsin local governments and the proposed amendments are among the strictest forms of TELs. For local governments there are strict rules on how quickly property tax levies are allowed to increase, while the proposed TABOR would place strict restrictions on growth in expenditures, and WTPA would place strict restrictions on the growth of revenues. Therefore, we elected to use simple dummy variables to identify states

226. McGuire & Rueben, *supra* note 7.

227. *See infra* Table 8.

that have imposed property tax levy limits at the local level as well as revenue or expenditure limits on state governments. We estimate one model using the local limitations and a second model using state-level TELs.

Given the panel nature of our data coupled with the timeframes in which states have or have not imposed such limits, we construct two separate dummy variables for both the local and state levels. One dummy takes on the value of one if states imposed such limits prior to 1987 and zero otherwise. The second dummy takes on a value of one if the state imposes a limit after 1987, again zero otherwise. Therefore, we have four specific dummy variables: yes or no if the state has imposed a property tax levy limit on local governments prior to or after 1987 and if the state has imposed a revenue or expenditure limit on state government prior to or after 1987. To control for the effects of other factors that influence growth in per capita income, we include a range of other variables. These include:

- Earnings Per Job;
- Gross State Product as a Percentage of U.S. GSP;
- Per Capita Income from Unemployment Insurance;
- Per Capita Income from Retirement Sources;
- Ratio of Farm to Non-farm Proprietors;
- Percentage of Employment in Manufacturing;
- Poverty Rate.

Earnings per job captures lagged growth and allows for an indirect test of the convergence hypothesis that is popular within the economic growth literature.[228] The convergence hypothesis states that incomes will converge over time with poorer states slowly catching up to richer states.[229] The state's share of Gross Domestic Product (or Gross State Product or GSP) is intended to capture the relative size of the state's economy.[230] Unlike convergence theory, endogenous growth theory suggests that economies can be characterized as exhibiting economies of

228. *See, e.g.*, Robert J. Barro & Xavier Sala-i-Martin, *Convergence*, 100 J. POL. ECON. 223 (1992); Steven C. Deller et al., *Agriculture and Rural Economic Growth*, 35 J. AGRIC. & APPLIED ECON. 517, 520–26 (2003).

229. Barro, *supra* note 228, at 224.

230. *Id.* at 229–30.

scale.[231] Within a growth framework, larger states have a comparative advantage with respect to growth.[232]

Per capita income from unemployment insurance is intended to capture the effects of national recessions.[233] Per capita income from retirement sources is aimed at capturing the large impact of retirement migration into southern, warmer climates. Although not all retirement migration is limited to warmer, southern states, much of the rapid growth of these states can be attributed to retirement migration. The ratio of farm to non-farm proprietors is intended to capture the dependence of the state economy on agriculture. The percentage of employment in manufacturing is aimed at capturing the dependency of the state economy on manufacturing. The hypothesis with these two latter measures is that at the national level, neither agriculture nor manufacturing are growth sectors, and higher levels of dependency on either of these two sectors will act as a drag on the economy. Finally, the poverty rate is intended to capture how a higher level of poverty can represent a drain on the growth potential of the state's economy.

Given the panel nature of our data, there are several ways in which we can estimate the model ranging from a Fuller specification to fixed as well as random effects.[234] For our study, we elected to use the Parker approach where we explicitly allow for lagged time effects to enter into the model through the error structure.[235] A total of six specifications of the model are estimated with each model having a different combination of TEL dummy variables.

Before turning to the regression analysis, we perform a set of simple sub-sample equivalency tests where we look at the mean level of annual growth in per capita income across states that have imposed TELs and

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231. *Id.* at 240.

232. *See id.* at 241–45.

233. *See infra* Table 9.

234. For a detailed discussion of the strengths and weaknesses of alternative methods of estimating panel models within an economic growth framework, see Mark D. Partridge, *Does Income Distribution Affect U.S. State Economic Growth?*, 45 J. REGIONAL SCI. 363 (2005).

235. The model can be expressed formally as:

$$y_{it} = \sum_{k=1}^{m} X_{itk}\beta_k + e_{it}; \quad i = 1,...,50; t = 1,...,17$$

where the error structure takes the form:

$$e_{it} = \varepsilon_i + \nu_t + \upsilon_{it} \text{ where } e_{it} = \rho_i e_{it-1} + \upsilon_{it}.$$

those that have not, as defined above.[236] The results of this simple preliminary analysis are provided in Table 8. Per capita income in states that have imposed property tax levy limits on local government prior to 1987 had an average annual growth rate of 4.38% in per capita income versus 4.45% for those that had not imposed such a limit. While this suggests that states with local property tax levy limits experienced slightly slower growth in per capita income over this period, the observed difference is not statistically significant. States that imposed a property tax levy limit after 1987 grew slower (4.24%) than those that had not imposed such a limit (4.44%). But again, the statistical tests of equivalency suggest that these differences are not statistically different. Contrary to what the advocates of property tax levy limits advance as an economic growth motivation for imposing such limits, the data suggest that such limits have no meaningful effect on growth in per capita income.

When we consider the differences across states that have imposed a revenue or expenditure limit on state government, we see a similar pattern. States that imposed such limits prior to 1987 had an average annual growth rate in per capita income from 1987 to 2004 of 4.35%, while states that had not imposed such a limit prior to 1987 had an average annual growth rate of 4.48%. The same pattern is present for states that have imposed revenue or expenditure limits on state governments after 1987. The statistical test, however, suggests that the observed differences are not statistically significant. In other words, the TELs imposed on a state's revenue or expenditures do not appear to influence average growth levels.

The results of the complete model are presented in Table 9. In general, the results for the control variables are consistent and statistically significant across all six specifications of the growth model. Higher levels of earnings per job have a positive, albeit small, impact on the growth in per capita income. This is somewhat expected, but does not lend support to the idea of convergence in income across states over time. The negative coefficients on the state's share of U.S. gross domestic product are somewhat surprising in light of endogenous growth theory that suggests that larger economies have a comparative advantage over smaller economies. One possible interpretation is that smaller economies are catching up to larger economies; their per capita incomes are growing more rapidly, which would be consistent with a convergence hypothesis.

236. *See infra* Table 8.

As expected, per capita income from unemployment insurance has a negative impact on the growth rate of per capita income. Also as expected, a higher level of per capita income from retirement sources causes a modestly higher rate of growth in per capita income. States that are attracting retirement migrants are experiencing faster economic growth, all else held constant. Higher levels of dependency on agriculture and manufacturing have a positive impact on economic growth which is the opposite of what is expected. One potential explanation is that while these are not growth sectors in and of themselves, the jobs that are associated with these industries are higher paying.[237] Finally, higher levels of poverty are actually associated with faster growth in per capita income. This is again evidence of convergence in income across states over time.

Turning attention to the set of dummy variables identifying states with and without restrictive TELs on local governments, several patterns are apparent. First, for states that imposed a property tax levy limit on local governments prior to 1987, the limit does not appear to have any predictive power in explaining growth in per capita income. But states that imposed such a limit after 1987 appear to have had a negative affect on income growth. This is the opposite of what the advocates of property tax limits maintain. It appears instead that such limits hinder economic growth. If we combine the two models and enter both of the property tax levy limits variables into one model, the results remain intact. One way to interpret these results is within a long- versus short-term framework. In states where a local property tax limit has been in place since before 1987, the local governments have had time to identify strategies to maintain service levels and keep it from affecting economic growth without resorting to the property tax. Local governments that have had to operate under property tax levy limits over a shorter period of time have not yet been able to put in place strategies to maintain service levels, and this has affected their economic growth.

When we examine revenue or expenditure limits on state governments, we get a very different result. In states with TELs imposed prior to 1987, there is statistically weak evidence that revenue and expenditure limits actually have a positive impact on the growth

237. One line of reasoning suggests that within agriculture, marginal farms are being weeded out of the industry and only the most profitable farms remain in operation. There is also evidence that many of the manufacturing jobs that are moving overseas tend to be lower-skilled, lower-paying jobs which means that the remaining manufacturing jobs require higher levels of skills and higher pay.

rate of per capita income. The same result holds for states that have imposed such a limit after 1987. When we combine the two state TEL limit variables in the same model, we find that the prior results are stable: the statistical results suggest that revenue and expenditure limits on state government have a positive impact on the growth of per capita income.

We estimated the elasticity of TELs on per capita income growth. We calculated the elasticity using the average coefficient across the two models (one with only one dummy and the model with both dummies). The size of the coefficients is similar in the two models. Because the coefficients on the property tax levy limit before 1987 are insignificant, the elasticity is zero. The elasticity on the property tax levy imposed after 1987 is -0.00656%. States that imposed such a limit on local governments after 1987 experienced a 0.66% lower growth rate in per capita income. States that imposed a state TEL prior to 1987 experienced a 1.93% higher growth rate in per capita income. States that imposed a TEL after 1987 experienced a 0.63% higher growth rate. Given that the average growth in per capita income is 4.42%, a state with a local property tax levy limit imposed after 1987 will experience an average annual growth rate of 4.39%. A state with a TEL imposed prior to 1987 has an average growth rate of 4.49%. A state with a TEL imposed after 1987 has an average growth rate of 4.45%.

From this analysis, we can conclude that limits on local governments may actually hinder economic growth. This could be caused by the nature of services offered by local governments, including protective services, water and waste treatment, and perhaps most importantly, education. These are the types of services that people and firms seek out when making location decisions. Hindering the ability of local governments to provide these services may create bottlenecks in the local economy, hence limiting economic growth. Limits placed on state government, however, appear to have a different impact on economic growth. It may be that services provided by state government are more removed from citizens and firms. Thus, restrictions on state services may not be felt by citizens as much as similar restrictions on local governments. What this analysis cannot address is the role of state aids (e.g., school aids) in this complex picture. These results cannot address the very real case of state limits prohibiting the flow of aids to local governments.

VI. CONCLUSIONS

This study has provided an overview of the tax and expenditure limitations movement on both local and state governments. There is a long history of TELs on local government, while the movement to impose them at the state level is more recent. Nearly all states have some form of TELs on local governments. For this reason, the research on TELs focuses on local governments. The research can be broken into three categories: fiscal impacts of TELs, impacts of TELs on local government processes, and impacts of TELs on economic growth. While there is a large amount of literature on the impact of taxes on economic growth, it is still inconclusive. In part, the impact of taxes on economic growth may be changing over time. Tax differentials might also have a larger impact in a small area, when there are few other differences in costs for firms to respond. We could find only two studies that address the impact of TELs on economic growth. One focuses on local TELs and their impacts on local public sector wages compared with private wages. The second limits its focus to Colorado and the western states. Thus, our study is the first to take a broad look at the impact of both local- and state-level TELs on growth in state per capita income.

- While Wisconsin has historically been a high tax state, in terms of expenditures, it does not appear to be out of line. Wisconsin's progressive political philosophy results in a dependence on taxes as opposed to alternative sources of revenue, such as fees and charges.
- Correlation analysis finds that there are no "low tax–high income" states.
- Growth in the public sector is a natural byproduct of overall economic growth. Simple correlations indicate that the public sector grows more slowly than the overall economy. Wisconsin fits this pattern.
- Employment in the Wisconsin public sector does not appear to be out of line with respect to other states.
- TELs imposed on local governments may have a negative impact on the growth of per capita income in the short run. They do not appear to affect economic growth in the longer run. On the other hand, TELs imposed on state governments may have a positive impact on economic growth. A possible explanation

> may be that the public services that matter most to the economy are provided by local and not state governments.

This study should be viewed as one step forward in understanding the implications of the size of government and TELs on economic activity and growth. What we lack is a clear theoretical framework to phrase our questions and craft the empirical work. As we have reviewed, the literature is not wanting for theoretical arguments, but there lacks a unifying framework to rigorously test our central hypotheses. Part of the challenge is that the framework is not purely economic or political, but rather it needs to be interdisciplinary. One could even argue that sociology has something to bring to the table in terms of the notion of "group think." As noted by many in the literature, some of these TEL movements take on a life of their own.

In addition to trying to think through a more comprehensive framework to think about TELs and economic growth, we also need to refine our thinking about how we empirically measure TELs. Since every state is different, our simple dummy variables are a gross generalization. Our challenge is how we model such complexities into an economic growth framework. Then, how is it operationalized for empirical analysis? We believe that this fundamental problem is why the vast majority of academic studies that are available tend to focus on individual states in an almost case-study structure. But in order to draw general inferences, we must move beyond these case studies. We believe that this study is a step in that direction.

TABLE 1

TYPES AND CLASSIFICATION OF TAX AND EXPENDITURE LIMITS (TEL)[238]

Overall Property Tax Rate Limitations Limits on property tax rates are the most common form of TEL. These limits are on overall property tax rates and often set a ceiling that the rate cannot exceed without a vote of local citizens. These limits can be circumvented through alterations in assessment practices. If the rate limits are matched with limits on assessment increases, this TEL is potentially binding.	**General Revenue or Expenditure Increases** This type of TEL limits the amount that revenues and/or expenditures can increase from the previous year. Often tied to inflation rates or population growth rates, this type of TEL is the most binding for governments.
Specific Property Tax Rate Limitations Same for overall property tax rate limitations but targeted to specific units of government (e.g., school districts, counties) or narrowly defined service areas. These can be circumvented through changes in assessment practices or in the case of specific services through interfund transfers. As with overall property tax rate limits, if the limit is matched with limits on assessments, this TEL is potentially binding.	**Limits on Assessment Increases** Since the property tax collected is a function of assessed property values, coupled with the tax rate, this TEL limits the rate at which the assessed value of properties can be increased. If there are no limits on the property tax rate, governments dependent on the property tax can bypass this TEL by simply raising the property tax rate. If this TEL is coupled with limits on the property tax rate, the overall effect can be binding on governments.
Property Tax Levy Limits This TEL limits the amount of revenue that can be generated through the property tax independent of the property tax rate. These limits often allow for a specific percentage increase from one year to the next. The fixed nature of this TEL makes it difficult to circumvent except for a diversification away from the property tax, for example, by increasing fees, charges, and sales taxes.	**Full Disclosure – Truth in Taxation** This type of TEL generally requires some type of public discussions and specific legislative vote prior to enactment of tax rates or levy increases. This TEL generally is not binding and requires a simple vote of the local legislative body to increase taxes.

238. The information in this Table was taken Joyce & Mullins, *supra* note 30, at 242.

TABLE 2
TEL CURRENTLY IMPOSED ON LOCAL GOVERNMENTS (ORIGINAL YEAR OF IMPOSITION/*AMENDMENT)[239]

C = County; M = Municipality; S = School District
(r) Repealed effective year specified / (s) Suspended effective year specified

State	Overall Property Tax Rate Limit	Specific Property Tax Rate Limit	Property Tax Revenue Limit	Assessment Increase Limit	General Revenue Limit	General Expenditure Limit	Full Disclosure
AL	1972 CMS *1978 CMS	1875 CM 1916 S	-	-	-	-	-
AK	-	1972 M	1972 M	-	-	-	-
AZ	1980 CMS	-	1913 CM *1980 CM	1980 CMS	-	1921 CM *1980 CM 1974 S *1981 S	-
AR	-	1883 CM	1981 CMS	2000 CMS	-	-	-
CA	1978 CMS *1986 CMS	1997 CMS	-	1978 CMS	1972 S	1979 CMS *1990 CMS	-
CO	-	1992 CMS	1913 CM 1992 S	-	1992 CMS	1992 CMS	1983 CM 1992 S
CT	-	-	-	-	-	-	-
DE	-	-	1972 C	-	-	-	1976 C
FL	-	1968 CM 1855 S *1968 S *1973 S	-	1995 CMS	-	-	1974 CMS *1980 CMS
GA	-	c.1890 C *1982(r) C 1945 S	-	-	-	-	1991 CMS
HI	-	-	-	-	-	-	1977 C
ID	1978 CMS	1913 C 1967 M 1963 S	1979 CMS *1992(r) CMS	-	-	-	1991 CMS
IL	-	1939 C 1961MS	1991 CMS	-	-	-	1981 CMS

239. The information in this Table is taken from Mullins & Wallin, *supra* note 1, at 4–5.

TABLE 2 (CONTINUED)

C = County; M = Municipality; S = School District
(r) Repealed effective year specified / (s) Suspended effective year specified

State	Overall Property Tax Rate Limit	Specific Property Tax Rate Limit	Property Tax Revenue Limit	Assessment Increase Limit	General Revenue Limit	General Expenditure Limit	Full Disclosure
IN	-	-	1973 CMS *1977 CMS *1980 CMS	-	-	-	-
IA	-	n.a. *1983 C 1972 M *1992 M 1989 S	-	1978 CMS *1980 CMS	-	1971 S	1983 C
KS	-	1933/89(s) CMS	1970 CM *1989(s) CM	-	-	1973 S	-
KY	-	1908 C 1908 M *1985 M 1946 S	1979 CMS	-	-	-	1979 CMS
LA	-	1974 CMS	1978 CMS	-	-	-	-
ME	-	-	-	-	-	-	-
MD	-	-	-	1957 CMS *1991 CMS	-	-	1977 CM
MA	-	1980 M *1991 M	1980/83 M	-	-	-	-
MI	1933 CS	1949 M 1994 S	1978 CMS	1994 CMS	-	-	1982 CMS
MN	-	-	-	-	1971 CM *1993(r) CM		1985 CMS
MS	-	-	1980 CM 1983 S *1909 S	-	-	-	-
MO	-	1875 CMS	1980 CMS	-	-	-	-
MT	-	1931 C *1987 C n.a. M *1965 M 1971 S	1987 CM	-	-	-	1974 CMS

TABLE 2 (CONTINUED)

C = County; M = Municipality; S = School District
(r) Repealed effective year specified / (s) Suspended effective year specified

State	Overall Property Tax Rate Limit	Specific Property Tax Rate Limit	Property Tax Revenue Limit	Assessment Increase Limit	General Revenue Limit	General Expenditure Limit	Full Disclosure
NE	-	1903 C 1957 M 1921 S *1999 S	1990 CM	-	-	1996 CM 1991 S *1996 S	1990 CM
NV	1936 CMS	1929 MS	1983 C 1983 M *1987 M	-	1984 CM *1989(r) CM	-	1985 CMS
NH	-	-	-	-	-	-	-
NJ	-	-	1980 C	-	-	1976 M *1991 M 1976 S *1990 S	-
NM	1914 CMS	1973 CMS *1987 CMS	1979 CMS	1979 CMS *2000 CMS	-	-	-
NY	-	1894 CMS	-	1981 C 1986 M	-	-	-
NC	-	1973 CM	-	-	-	-	-
ND	-	1929 CMS	1981 CM	-	-	-	-
OH	1929 CMS *1934 CMS *1953 CMS	-	1976 CMS	-	-	-	-
OK	1933 CMA	-	-	1996 CMS	-	-	-
OR	1991 CMS	1997 CM 1991 S *1997 S	-	-	-	-	-
PA	-	1959 CMS	c.1940 C	-	-	-	-
RI	-	-	1985 M	-	-	1979 M	-
SC	-	-	-	-	-	1975 CMS	-

TABLE 2 (CONTINUED)

C = County; M = Municipality; S = School District
(r) Repealed effective year specified / (s) Suspended effective year specified

State	Overall Property Tax Rate Limit	Specific Property Tax Rate Limit	Property Tax Revenue Limit	Assessment Increase Limit	General Revenue Limit	General Expenditure Limit	Full Disclosure
SD	-	1915 CMS	-	-	-	-	-
TN	-	-	-	-	-	1979 CM	-
TX	-	1876 CM 1888 S	1982 CMS	-	-	1982 CMS	-
UT	-	1898/61 C 1929 M 1929 S *1988 S	1969 CMS *1986(r) CMS	-	-	1986 CMS	-
VT	-	-	-	-	-	-	-
VA	-	-	-	-	-	1976 CM	-
WA	1944 CMS *1973 CMS	1973 CM	1971 CM *1979 CM *2001 CM 1979 S *2001 S	2000 CMS	-	1990 CMS	-
WV	1939 CMS	1939 CMS	1990 CMS	-	-	-	-
WI	-	1994 C	-	1994 S	-	-	-
WY	-	1890 CM 1911 S	-	-	-	-	-

TABLE 3
STATE TAX AND EXPENDITURE LIMITS 2005[240]

State	Year Adopted	Constitution or Statute	Type of Limit	Main Features of the Limit
Alaska	1982	Constitution	Spending	A cap on appropriations grows yearly by the increase in population and inflation.
Arizona	1978	Constitution	Spending	Appropriations cannot be more than 7.41% of total state personal income.
California	1979	Constitution	Spending	Annual appropriations growth linked to population growth and per capita personal income growth.
Colorado	1991	Statute	Spending	General fund appropriations limited to the lesser of (a) 5% of total state personal income or (b) 6% over the previous year's appropriation.
Colorado (continued)	1992	Constitution	Revenue & Spending	Most revenues limited to population growth plus inflation. Changes to spending limits or tax increases must receive voter approval.
Connecticut	1991	Statute	Spending	Spending limited to average of growth in personal income for previous five years or previous year's increase in inflation, whichever is greater.
Connecticut (continued)	1992	Constitution	Spending	Voters approved a limit similar to the statutory one in 1992, but it has not received the three-fifths vote in the legislature needed to take effect.
Delaware	1978	Constitution	Appropriations to Revenue Estimate	Appropriations limited to 98% of revenue estimate.
Florida	1994	Constitution	Revenue	Revenue limited to the average growth rate in state personal income for previous five years.

240. The information in this Table is taken from National Conference of State Legislatures, *supra* note 32.

TABLE 3 (CONTINUED)

State	Year Adopted	Constitution or Statute	Type of Limit	Main Features of the Limit
Hawaii	1978	Constitution	Spending	General fund spending must be less than the average growth in personal income in previous three years.
Idaho	1980	Statute	Spending	General fund appropriations cannot exceed 5.33% of total state personal income, as estimated by the State Tax Commission. One-time expenditures are exempt.
Indiana	2002	Statute	Spending	State spending cap per fiscal year with growth set according to formula for each biennial period.
Iowa	1992	Statute	Appropriations	Appropriations limited to 99% of the adjusted revenue estimate.
Louisiana	1993	Constitution	Spending	Expenditures limited to 1992 appropriations plus annual growth in state per capita personal income.
Maine	2005	Statute	Spending	Expenditure growth limited to a ten-year average of personal income growth, or maximum of 2.75%. Formulas are based on state's tax burden ranking.
Mass.	1986	Statute	Revenue	Revenue cannot exceed the three-year average growth in state wages and salaries. The limit was amended in 2002 adding definitions for a limit that would be tied to inflation in government purchasing plus 2%.
Michigan	1978	Constitution	Revenue	Revenue limited to 1% over 9.49% of the previous year's state personal income.
Mississippi	1982	Statute	Appropriations	Appropriations limited to 98% of projected revenue. The statutory limit can be amended by majority vote of legislature.
Missouri	1980	Constitution	Revenue	Revenue limited to 5.64% of previous year's total state personal income.

TABLE 3 (CONTINUED)

State	Year Adopted	Constitution or Statute	Type of Limit	Main Features of the Limit
Missouri, (continued)	1996	Constitution	Revenue	Voter approval required for tax hikes over approximately $77 million or 1% of state revenues, whichever is less.
Montana	1981	Statute	Spending	Spending is limited to a growth index based on state personal income.
Nevada	1979	Statute	Spending	Proposed expenditures are limited to the biennial percentage growth in state population and inflation.
New Jersey	1990	Statute	Spending	Expenditures are limited to the growth in state personal income.
North Carolina	1991	Statute	Spending	Spending is limited to 7% or less of total state personal income.
Oklahoma	1985	Constitution	Spending	Expenditures are limited to 12% annual growth adjusted for inflation.
Oklahoma (continued)	1985	Constitution	Appropriations	Appropriations are limited to 95% of certified revenue.
Oregon	2000	Constitution	Revenue	Any general fund revenue in excess of 2% of the revenue estimate must be refunded to taxpayers.
Oregon (continued)	2001	Statute	Spending	Appropriations growth limited to 8% of projected personal income for biennium.
Rhode Island	1992	Constitution	Appropriations	Appropriations limited to 98% of projected revenue.
South Carolina	1980 1984	Constitution	Spending	Spending growth is limited by either the average growth in personal income or 9.5% of total state personal income for the previous year, whichever is greater. The number of state employees is limited to a ratio of state population.
Tennessee	1978	Constitution	Spending	Appropriations limited to the growth in state personal income.

TABLE 3 (CONTINUED)

State	Year Adopted	Constitution or Statute	Type of Limit	Main Features of the Limit
Texas	1978	Constitution	Spending	Biennial appropriations limited to the growth in state personal income.
Utah	1989	Statute	Spending	Spending growth is limited by formula that includes growth in population, and inflation.
Washington	1993	Statute	Spending	Spending limited to average of inflation for previous three years plus population growth.
Wisconsin	2001	Statute	Spending	Spending limit on qualified appropriations (some exclusions) limited to personal income growth rate.

TABLE 4
STATE AND LOCAL GOVERNMENT FINANCES 2004[241]

Category	Percentage of Personal Income			Per Capita		
	U.S.	Wis.	Rank	U.S.($)	Wis. ($)	Rank
GENERAL REVENUE FROM OWN SOURCES	15.1%	16.0%	15	4,995	5,136	17
• Taxes	10.4%	11.5%	7	3,447	3,714	13
o Property taxes	3.3%	4.2%	8	1,086	1,350	12
o Sales and gross receipts						
▪ General sales	2.5%	2.3%	31	836	752	29
▪ Selective sales						
▪ Motor fuel	0.4%	0.5%	12	119	170	6
▪ Alcoholic beverages	0.1%	0.0%	37	17	9	40
▪ Tobacco products	0.1%	0.2%	18	43	56	18
o Individual income	2.2%	3.0%	10	734	954	12
o Corporate income	0.3%	0.4%	13	115	124	12
o Motor vehicle license	0.2%	0.2%	24	64	60	27
o Current charges	3.0%	3.0%	28	985	958	33
EXPENDITURES						
• Direct Expenditure	23.3%	24.0%	22	7,712	7,705	18
o Current operations	17.1%	17.8%	24	5,672	5,730	20
o Capital outlay	2.8%	2.5%	35	921	789	28
▪ Education	6.8%	7.6%	13	2,236	2,428	11
▪ Higher education	1.8%	2.4%	14	591	767	12
▪ Elementary and secondary education	4.7%	4.9%	14	1,542	1,585	17
▪ Public welfare	3.5%	3.9%	17	1,144	1,246	16
▪ Highways	1.2%	1.6%	19	403	522	17
▪ Police protection	0.7%	0.8%	11	238	252	12
▪ Fire protection	0.3%	0.3%	20	97	93	19
▪ Corrections	0.6%	0.7%	11	193	210	10
o Env't and housing	1.5%	1.6%	19	501	518	19
o Governmental admin.	1.0%	0.9%	37	344	285	39

241. Statistical analysis by the authors based on data from U.S. Census Bureau, *supra* note 13, U.S. Census Bureau, State and Local Government Finances by Level of Government and by State 2003–04, http://census.gov/govs/estimate/0400uss1_1.html (last visited Mar. 30 2007), and Bureau of Economic Analysis, *supra* note 204. Ranking includes Washington, D.C. (n = 51).

TABLE 5
PUBLIC SECTOR EMPLOYMENT PATTERNS[242]

	Total Employment	State Government	Local Government
		Growth in Employment: Percentage Change 1993–2004	
U.S.	20.1%	10.0%	21.3%
Wisconsin	17.2%	5.4%	16.0%
(Wis. Rank)	28	36	36
		Percentage of Total Employment 2004	
U.S.		3.0%	8.1%
Wisconsin		2.9%	8.0%
(Wis. Rank)		37	26
		Percentage Change in Public Share of Total Employment 1993–2004	
U.S.		-8.4%	1.0%
Wisconsin		-10.1%	-1.0%
(Wis. Rank)		27	32

242. Statistical analysis by the authors based on data from Bureau of Economic Analysis, *supra* note 204.

TABLE 6
CORRELATIONS BETWEEN STATE AND LOCAL GOVERNMENT FINANCES AND PER CAPITA INCOME: 2004[243]

	Percentage of Personal Income*	Per Capita*
General revenue from own sources	-0.0404 (0.7784)	0.8818 (0.0001)
▪ Taxes	0.3852 (0.0052)	0.7341 (0.0001)
o Property	0.3852 (0.0052)	0.7341 (0.0001)
o Sales and gross receipts		
• General sales	-0.2978 (0.0338)	0.3619 (0.0091)
• Selective sales		
- Motor fuel	-0.7367 (0.0001)	-0.1859 (0.1915)
- Alcoholic beverage	-0.3359 (0.0160)	0.3770 (0.0064)
- Tobacco products	0.1326 (0.3536)	0.4807 (0.0004)
o Individual income	0.1997 (0.1600)	0.4656 (0.0006)
o Corporate income	0.2769 (0.0491)	-0.0742 (0.6049)
o Motor vehicle license	-0.2825 (0.0446)	0.3178 (0.0231)
o Current charges	-0.6383 (0.0001)	-0.3226 (0.0210)

* Marginal difference indicated in parentheses.

243. Statistical analysis by the authors based on data from U.S. Census Bureau, *supra* note 13, U.S. Census Bureau, *supra* note 241, and Bureau of Economic Analysis, *supra* note 204.

TABLE 6 (CONTINUED)

	Percentage of Personal Income*	Per Capita*
Expenditure		
o Direct expenditure	-0.0895 (0.5325)	0.6147 (0.0001)
• Current operations	-0.1475 (0.3018)	0.4859 (0.0003)
• Capital outlay	0.0629 (0.6610)	0.5141 (0.0001)
• Education	-0.5157 (0.0001)	0.1288 (0.3677)
- Higher education	-0.6898 (0.0001)	-0.2168 (0.1264)
- Elementary & secondary education	-0.1161 (0.4174)	0.2720 (0.0535)
• Public welfare	-0.0766 (0.5932)	0.3292 (0.0183)
• Highways	-0.3672 0(0.0080)	-0.1353 (0.3439)
• Police protection	0.3531 (0.0110)	0.6305 (0.0001)
• Fire protection	0.2874 (0.0408)	0.4323 (0.0015)
• Correction	-0.1613 (0.2581)	-0.0731 (0.6102)
o Environment and housing	0.1732 (0.2243)	-0.2406 (0.0890)
o Governmental administration	-0.0539 (0.7073)	0.2769 (0.0492)

* Marginal difference indicated in parentheses.

TABLE 7
EMPLOYMENT GROWTH CORRELATIONS[244]

	Total Job Growth Rate 1993–2004*
State Government Job Growth Rate 1993–2004	0.5148 (0.0001)
Local Government Job Growth Rate 1993–2004	0.8256 (0.0001)
State Government Job Share of Total 1993	-0.1142 (0.4296)
Local Government Job Share of Total 1993	-0.0696 (0.6309)
Change in State Government Share of Total Employment 1993–2004	-0.4087 (0.0032)
Change in Local Government Share of Total Employment 1993–2004	-0.3289 (0.0197)

* Marginal difference indicated in parentheses.

244. Statistical analysis by the authors based on data from Bureau of Economic Analysis, *supra* note 204.

Table 8
MEAN GROWTH IN PER CAPITA INCOME 1987–2004 BY TEL[245]

	With TEL	Without TEL	F statistic*	Kruskal-Wallis*	Median*
Local					
TEL Prior to 1987	4.38	4.45	0.2123 (0.6451)	0.4795 (0.4886)	0.5724 (0.4493)
TEL After 1987	4.24	4.44	0.5035 (0.4782)	0.4804 (0.4882)	0.2555 (0.6133)
State					
TEL Prior to 1987	4.35	4.48	0.7119 (0.3990)	1.2064 (0.2720)	1.7078 (0.1913)
TEL After 1987	4.24	4.44	0.7694 (0.3806)	0.1657 (0.6839)	0.0445 (0.8329)

* Marginal difference indicated in parentheses.

245. Statistical analysis by the authors based on data from Bureau of Economic Analysis, *supra* note 204, National Conference of State Legislatures, *supra* note 32, and Mullins & Wallin, *supra* note 1, at 4–5.

TABLE 9
GROWTH IN PER CAPITA INCOME MODELS 1987–2004[246]

	Parks – Autoregressive*					
	Model A	Model B	Model C	Model D	Model E	Model F
Earnings Per Job	0.00000 (8.25)	0.00000 (8.84)	0.00000 (8.61)	0.00000 (8.18)	0.00000 (8.12)	0.00000 (7.81)
Gross State Product as a Percentage of US GSP	-0.08639 (4.60)	-0.09762 (6.39)	-0.10054 (5.09)	-0.08707 (5.49)	-0.08238 (5.20)	-0.08021 (4.95)
Per Capita Income Unemployment Insurance	-0.00006 (3.41)	-0.00005 (3.57)	-0.00005 (3.44)	-0.00005 (3.39)	-0.00006 (3.78)	-0.00006 (3.83)
Per Capita Income from Retirement Sources	0.00000 (4.76)	0.00000 (6.13)	0.00000 (5.24)	0.00000 (5.50)	0.00000 (3.88)	0.00000 (3.89)
Ratio of Farm to Non-farm Proprietors	0.03334 (6.03)	0.03596 (7.29)	0.03455 (6.42)	0.03603 (6.19)	0.02969 (5.56)	0.03178 (5.19)
Percentage of Employment in Manufacturing	0.07292 (5.20)	0.08329 (7.78)	0.08556 (6.72)	0.07233 (5.46)	0.06715 (5.47)	0.06795 (5.00)
Poverty Rate	0.00109 (9.65)	0.00114 (13.47)	0.00114 (10.90)	0.00104 (9.16)	0.00114 (12.41)	0.00107 (9.51)
Local TEL Prior to 1987	0.00064 (0.55)		-0.00006 (0.06)			
Local TEL After 1987		-0.00373 (2.49)	-0.00352 (2.23)			
State TEL Prior to 1987				0.00184 (1.67)		0.00187 (1.70)
State TEL After 1987					0.00199 (1.88)	0.00267 (2.65)

* t- statistic in parentheses.

246. Statistical analysis by the authors based on data from U.S. Census Bureau, *supra* note 13, Bureau of Economic Analysis, *supra* note 204, U.S. Census Bureau, Historical Poverty Tables, http://www.census.gov/hhes/www/poverty/histpov/hstpov21.html (last visited Mar. 30, 2007), National Conference of State Legislatures, *supra* note 32, and Mullins & Wallin, *supra* note 1, at 4–5.